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UNIVERSITY OF MARYLAND

THESES

1886 (c)

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Suter, W. Norwood	Asiatic Cholera	(no title page)

[1] Text lost in inner margin during binding process.

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

Author	Title	Notes
Triana, Adolpho M.	Gonorrhoea	(noteworthy calligraphy on title page)
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Houseal, W. Gustave	Typhoid Fever	

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UNIVERSITY OF MARYLAND

THESES

1886

Robinson, L. B.	Pneumonia	26p.
Lucas, ~~C.~~ Charles C.	Agua (water)	14p.
Scott, J. ~~S.~~ Sloane	Digestion	26p.
Corbell, E. F.	Masturbation	29p.
Scott, E. A.	Carcinoma (Cancer)	26p.
Burchinal, ~~L.~~ Lowery N.	Rheumatism	27p.
Capehart, B. Ashbourne	Inflammation	8p.
Glassell, R. T.	Pneumonia	30p.
Hays, T. H. Heyward	Disinfectants and Disinfection	17p.
McLaughlin, J. M.	Arsenic	18p.
Anderson, R. J.	Intermittent Fever	18p.
Downs, ~~E.~~ L.	Puerperal Fever	30p.
West, Levin	Why?	17p.
Sease, J. M.	Arsenic	18p.
~~Suter~~ Lutes, W. N.	Asiatic Cholera no title page	13p.
Triana, A. M.	Gonorrhoea Legal papers, folded	16p.
Kibler, J. M.	Development of the Embryo no title page	23p. Legal papers, folded
Houseal, W. G.	Typhoid Fever	40p. Legal papers, folded

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toration at all visible, in children it may be swallowed or absorbed. Sometimes in the old it suddenly ceases, this is a bad sight as the bronchial tubes may be filled up and death may result from [illegible] [illegible]. Under the microscope red blood corpuscles, fatty matter, epithelial cells, and in some cases tube casts, and casts of the fine capillaries in the sputa.

The rise of temperature may be coincident with the chill. In a few hours it may rise to 30° or 35°. There may be a slight exacerbation of temperature ½° less in the morning. It reaches its highest point sometimes by the third day and in some cases not until just before the crisis.

In some cases just before death the [illegible]

There is a peculiar anxious look in the countenance, and a marked change in the color. There may be a dark reddish circumscribed spot over the malar bone, and the greater the amount of lung affected the larger the spot. It may be but on one cheek, "if on both" more deeply flushed on the affected side. Herpetic eruptions on the lips, and edge of the nostrils are common. Delirium and convulsions do not occur in adults except in alcoholic subjects, and when it extends from the base towards the apex. The chlorates in the urine are lessened or altogether absent, and uric acid is increased in amount and the specific gravity is greater.

Signs derived from auscultation and [illegible]

1st or Congestive Stage

If the Pneumonia is deep seated there will be no auscultatory sign until after the 2d day, In most cases during the first day, on inspection some restriction to the motion of the chest may be observed. Dem. resonant on percussion. On [illegible] a little less resonant. And on palpation vocal fremitus is slightly increased, On auscultation slight departure from the normal respiratory murmur. Later The crepitant rales heard, at the end of the respiration caused by the sides of the alveoli sticking together and when the air is respired they separate with a crackling sound. Continues for from 2 2 hours and in some cases for three days. But in some cases the [illegible] to the 2d stage is so sudden that it [illegible] the lungs

rapidly that the returning rales are not [illegible].
In [illegible] infiltration continued high temperature, great prostration and symptoms of collapse. The [illegible] breathing continues, dulness on percussion [illegible] and coarse bubbling rales are heard. If an abscess occur there will cavernous breathing and pectoriloquy.

Differential diagnosis

Ordinary cases are recognized without difficulty. May be mistaken for Pleurisy. In rigor in the commencing pleurisy temperature not so high & no [illegible]. The pain in pneumonia is dull, in pleurisy sharp and lancinating. In pneumonia there is audible [illegible] the crepitant rale, in pleurisy the friction [illegible] synchronous with the [illegible]

respiratory movements, [illegible] the ear: In Pneumonia the crepitant [illegible] is succeeded by bronchophony [illegible] in pleurisy, when the exudation [illegible] the lung there is a modified bronchophony, but when the lung collapses all breath and voice sounds cease. To distinguish between lobar and lobular [illegible] the [illegible] will be limited, to points immediately over the affected lobule, while the part will be resonant. From [illegible] by the absence of the auscultatory signs. From bronchitis. Vocal fremitus increased in pneumonia and dullness on percussion — in bronchitis vocal fremitus is unaltered, and the percussion not is unaffected. In pneumonia in auscultation there are crepitant [illegible] [illegible] [illegible] [illegible]

[illegible]

Field

especially in the case of adolescents
and children, in whom a small
[illegible] may be accompanied
[illegible] with
[illegible] If the [illegible]
in the third place you [illegible]
[illegible] with the [illegible]
[illegible] by the [illegible]
[illegible] and, and in the
[illegible] and [illegible] by [illegible]
[illegible] and irritation is not going on,
[illegible] may be applied to the [illegible]
[illegible], and [illegible]
[illegible] [illegible]
[illegible] [illegible]
[illegible]

Thesis, written by L. B. Robins
Patterson
Jumata
Pa
18

"Thesis". Subject - "Aqua"
March. 1886.

Chas: C. Lucas.
Shepherdstown.
Jeff. Co: W. Va.

Aqua.

[illegible] use of water in the preservation of health and in treatment of disease, is a subject well worthy of [illegible] attention. The value of pure drinking water, a matter which should never be disregarded in public or in private. To obtain it in a state of absolute purity is of course impossible, but to obtain it in a state of sufficient purity to be put to use is a matter which is receiving almost universal attention through our Sanitary Associations. Water when impure may injurious as it frequently contains both dissolved and insoluble organic matters, and in many cases serves to convey the germs of different diseases. Water is the most essential element to life. It regulates the bodily heat and carries off effete matters, and it is necessary that every part of the animal economy should have a certain amount of it. Men have been known to live for a considerable time without food, but can hardly live for more than four or five days when wholly deprived of water. As I have already said, everyone with many years

convey the germs of some of our gravest diseases, and
educated medical man has only to examine the
ords of some epidemics of Typhoid Fever to become thoroughly
convinced of this. If we consider how often wells and privies
e placed adjacent to each other and how difficult it
to prevent the contents of the privies from contaminating
water in the wells, we can readily see how the
pecific germs of Typhoid Fever may get into the
inking water and thus it serve to transmit
his grave disease to numbers of those who come to
well for their daily supply. Hence the necessity of
rying the excreta of Typhoid Fever patients in a
parate place and as far as possible removed from
y well or cistern from which water is used.
hat by means of water is the most common way
which Typhoid Fever is transmitted has been proved
nclusively, for when pure drinking water is used
istead of that which is contaminated by germs of the
isease, its progress is stopped or lessened to a great
gree. In some cases creeks or rivers have been infected
receiving the washings from fields which have been

ommed with the contents of privies into which the
creta from Typhoid Fever patients have been thrown. Thus there
ve been extensive epidemics caused. In some of these
ses persons although living in the same neighbor-
od, but using a different water supply, have escaped
e disease, thus proving conclusively that it was the
ater which had served to convey its germs.
Cholera, Scarlatina &c. are also sometimes caused by their
spective germs getting into drinking water. This shows
ow important it is for us all to bear in mind the
importance, and I may say, the necessity of using
nly water from a source of healthful purity.
When a physician has a case of Typhoid Fever to treat
e should try to improve his patients condition and to
mond the other members of the family, by trying to
impress them with the importance of using pure
ater and of properly disposing of the excreta.
The "medicated waters" as found in nature have proven
aluable in many cases. By this wonderful provision of
ature their medicinal qualities are applicable to many
diseases. They seem to constitute natures "medical laboratory

among the most valuable "mineral" waters I may mention
Chalybeate and the Sulphurous waters. Among the
alybeate springs I will only mention one - that is
Rockbridge Alum Springs. These Chalybeate waters are
eful as medicinal preparations of Iron. They are
y beneficial in Amenorrhoea and numerous other
iseases which depend on Anaemia.
the Sulphurous mineral waters I may mention
White Sulphur Springs. These waters are very useful
the treatment of Hepatic disorders &c, but they are
rticularly useful in "skin affections". Besides the
ineral waters I have mentioned there are alkaline
ters which are useful in the treatment of diseases
ich call for an "alkaline" treatment, as Rheumatism
d Gout. The profession generally has undergone a
great change in the last twenty five years, as
the use of water internally in fevers.
or example - the old practitioner would not allow a
ver patient to take water without warming it, or at
st depriving it of its coldness. A certain amount
water is essential to health and it should always

t in febrile conditions a greater amount would be
lled for. At the present time instead of withhold-
g it from his patient the physician allows him
have it in such quantities as he may deem
roper. It has been asserted by some that the thirst
the patient is the best guide as to the quantity
ought to have, but it seems to me this would
t do in all cases, as a fever patient will
uetimes drink to such excess as to interfere with
e powers of digestion and assimilation.
This would give rise to stomach and intestinal disorders
hich would, it seems to me, have a great tendency
make the patients condition worse. Therefore I should
nsider it proper to give him what I thought proper,
nd not allow his feelings to influence me to give
in a greater amount. Water is also very efficient
fevers when applied externally. It may be applied in
mins ways, as - affusions, douches, baths, hot packs
ebags &c. The cold affusion is often used to reduce
er heat. It consists in dashing cold water on the body
hich has been previously stripped and laid on a [illegible]

th. When the patient complains of cold he should be
ped dry, placed in bed, covered well, and given some
imulant to aid reaction, and consequent perspiration.
is however is a very harsh method of proceeding and
private practice would seldom be admissable.
he "cold bath" is greatly preferable. The best way of giv-
is to place the patient in the bath above the temper-
e of the body, and then gradually cool it by adding
ail lumps of ice, or some cold water, until a
mperature of 65° or 70° Fahr: is reached. We should
ten the temperature of the patient at the same time
hich should be taken by a thermometer placed in the
outh or rectum. After the bath has put the patient to
ed as after the affusion. The cold bath has the effect
moistening the skin and lowering the temperature,
d the pulse becomes slower. The greater number of
se who die from Typhoid Fever, die directly or indirectly
m the effects of excessive heat. The tissues of the
dy waste away, and are, as it were, consumed
ring the fever. It becomes therefore a matter of great
portance to lower the bodily temperature as soon

possible when it exceeds a temp. of 104° Fahr.
is can best be done by the cold water treatment.
private practice the cold bath, douche and affusion, are
very inconvenient and it would be almost impossible to get
patients to consent to their employment. In these
es I think the "wet pack" would be preferable.
at is to put beneath the patient a gum cloth, and
strip him and envelope him in a wet sheet. As soon
the sheet gains warmth from the body we should
inkle it with cold water. After the patient has been wrapped
the sheet for fifteen minutes or it may be a little longer
should be wiped dry and placed back in bed. This may be
ated as often as excess of temperature may require.
y great benefit has followed the use of cold water in this
y, but I believe that when it is necessary to use cold water
ks &c. they should be used freely. Another way which is a very
d one, in which water may be used in the treatment of
ur, is to have a rubber "water bed" so arranged that it
tely surrounds the patient, and by passing hot or cold water
ugh it we may change our patient temperature without
bjecting him to the trouble of being removed from bed.

apparatus, however would be very expensive and on that
ount would be beyond the reach of many fever patients
the treatment of Typhoid Fever with cold water, hemorrhage
n the bowels, is a contraindication for its employment
the internal congestion as a result of the cooling to
surface might increase the liability to hemorrhage.
all events the movements during its application would
very undesirable. It should not be used during
ustination. In patients whose heart action is very weak
would also be unwise to use it internally as the shock
ght be very injurious if not dangerous.
n the force of the circulation is so reduced that the
face of the body is cool while the interior is hot, there
no hope that the further cooling of the surface by
tu would have any beneficial effect.
n Insolatio we have nothing better than cold water applied
the body. Ice may also be applied to the head. It has been
ommended in these cases the wrap the patient in a
t and pour water over him with a common
inkling pot. This is applied over the whole body at intervals
a few minutes. The proper length of time to use this

determined by watching the patient's temperature and
ulse. If the pulse be very feeble we may give stimulants
ve or less freely. In this affection, this manner of
tment is very good when the temp. is up to 10[illegible] Fahr.
en below this, sponging of the body has been considered
fficient. The cold "douche" also is very good to break up an
sterical convulsion. For the irritation of the skin in the
sh of Scarlatina, sponging with cool or tepid water is
ly recommended. In this case the "offusion" would be too
lent and would also be very troublesome. A tepid or warm
th is said also to lessen the liability of renal disorders
uplicating this disease. If the skin is kept in as healthy
condition as possible by the use of the bath, it is very
obable that there is far less danger of these complications.
he 'wet sheet' is also very useful in causing diaphoresis.
may be used thus; the patient stripped of all clothing is
veloped in a sheet wet with water, and covered with blankets.
e remains thus until free perspiration is induced.
s soon as this occurs, he should be taken out, wiped dry
d placed in bed, where refreshing sleep is likely to follow.
is may be repeated if necessary. The above procedure is

hydropathic one, but the regular practitioner should not discard it on that account. "Insomnia" may very often be relieved by a bath just before going to bed. The bath may be warm, but if the head is hot and the circulation active we may apply cold to the head at the same time as the bath is applied to the body. In "Chronic" as well as in "Acute" "Rheumatism", the vapour bath or hot wet pack is useful in exciting the free action of the skin. The "vapour bath" and "wet pack" is especially good in "Rheumatism" when the free elimination of "urea" is interfered with and there is danger of "Uraemic Coma". After the wet pack is used the patient should be well covered to prevent perspiration.

After an attack of "Acute Articular Rheumatism" the "Turkish" bath is excellent to restore suppleness to the joints and muscles. In numerous other diseases these baths, while not bringing about a cure in themselves will greatly aid the action of other remedies by keeping the skin and muscular system in a healthy condition.

Cold water 'locally' applied is also very useful in many different diseases, and in different ways.

It has been used by injecting it into the rectum and by

ying wet cloths on different parts to reduce inflammation
"Simple Acute Laryngitis" we may use compresses wrung
ith cold water, or what is perhaps better, we may use
rushed ice in oil silk bags, laid over the part.
This has been highly recommended, by Chevers speaking
it in his lecture upon that disease.
"Gastrorhagia" may in many cases be greatly relieved by
king ice water or by swallowing small lumps of ice.
In very urgent cases as a means of relieving the hemorrhage
ice may also be placed in bags and laid over the
epigastrium. "Pulmonary" hemorrhage is also sometimes
elieved by placing ice bags around the chest.
In the local application of cold, water may be very well used
: coiling a rubber tube around the part and passing
ld water through it. Of course this may be used for
e application of heat by using hot water. These may
: used when dry cold or heat is desirable.
ne of the most useful applications of ice is the ice cap
in "Brain fever". This is often of great benefit. The ice is
rushed and placed in a bag or cap made of oil
ilk, which is large enough to cover the entire crown

...e relief is sometimes seen to be immediate when this is ...plied. Ice has more "latent" heat than water and is ...refore a far better cooling agent. It is not best to use ...recklessly, as it may produce "shock" and thus act as ...n astringent by contracting the capillaries.

...n using water - 70° Fahr: is usually as low as is good. ...old "effusions" have been found beneficial in "Chorea" when ...plied to the head or spine.

...tarm water is very beneficial in a number of cases when ...plied locally. Inhalations of steam are recommended in ...ronchitis - Acute and Chronic. It may be used in different ...ys - the patient may be kept in a close room and a vessel ... water kept constantly steaming on a stove, the steam ...s filling the whole apartment, or he may use an ...halei. This is an exceedingly efficacious remedy.

...of "Howard" recommends hot water injections in "Chronic Metritis" ... this case a good and plentiful injection should be given ...d should be thrown into the vagina with a strong hand ...e hot water dressings are used for wounds, contusions ... ...e one of acute inflammation is said to be very limited ...hen hot water is used in these cases.

in the use of "Esmarch's" bandage in amputations. there is
ole to be a good deal of "Capillary oozing."
this, both hot and cold water have been used, but the hot
ter is best as its effects in stopping the oozing are more
manent. The "poultice" is useful chiefly on account of its
oisture and warmth. In many cases there is no especial
ture in the meal &c. of which the poultice is made, and
these cases hot "compresses" may be equally as good if not
er. The effect of the cold bath in health is also well worthy
the attention of every one. When a healthy person gets into
cold bath, the first effects of the cold is to contract the
apillaries of the skin. This gives the body a white, pale hue.
n this comes "reaction," when the capillaries are dilated and
body is in a glow. The bather should leave the bath before
second contraction of the capillaries takes place, as this
ond "contraction" is permanent.
cold bath is very good in persons of robust health but in
se who are weakly it is not to be recommended as the
ock" of the cold water might be injurious.

the foregoing pages I have tried to mention some of the
st important uses of water "therapeutically".
ave treated the subject very imperfectly, but to mention all
uses of this most indispensable element and its compar-
ive worth in different diseases, would require a longer
e and a much longer article, than is allowed by the
its of a college "Thesis".

Very respectfully

Chas. C. Lucas.

Digestion

J. Sloane Scott,
Stewartstown
Pa.

1886.

Food & Digestion

In treating this subject I will endeavor to be as clear and simple as possiable, for no one during the short time they spend at college can by any means do such a vast and unportant subject the justice it requires Many have written, and much has been said concerning this subject and yet there remains room for much to be said. Men will as this subject becomes more clear express their different views. I will endeavor in a brief way to and discribe the process of digestion as it is carried on in the human stomach. We are all compelled to take some kind of nurishment to keep the vital forces at or in working order.

and the nutriment must have some kind of an appendage for conveying the food to the stomach when it is distributed to the various parts of the body to sustain this force. As the animal body increases in size and weight from birth to manhood during the whole of life there is an incessant change going on in the body. It is a law made by the creator at the beginning that life cannot continue long in animal matter. The atoms which compose the living body receive the principle of life when they enter their appointed places and become the body. They however retain this principle but a short time and while they retain it they perform their

work Food is not living matter
Much that we eat. Bread. vegetables
and fruits do not bear any resemb-
ance to flesh. Yet these matters life
less as they seem are converted in
to living flesh and not only our flesh
but several and various kinds which
enter into the composition of the human body
The digestive apparatus effects a
change in the food. first it grinds
it in the mouth. dissolves it and
converts it into a mass of material
fit to supply the blood and send
the nutritious materials to the heart
The blood vessels carry this blood to
all parts of the system and with this
they supply the waste and nourish

the different organs.

This digestive apparatus consists of a mouth and pharynx the oesophagus or gullet the stomach and the intestinal or alimentary canal. At the upper end of this apparatus is the lip which prevent the substances which are taken in the mouth from dropping out The teeth and tongue which assist in grinding up the material, these are also assisted by the salivary glands which pour out saliva and moisture the substances and make the task of swallowing much more easy for without the aid of these glands it would be a difficult task to perform. The munching of saliva effects this objects

For coated over with glairy substance or juice the crushed or bruised substances are much more easily passed along the oesophageal tube into the stomach, but there are certain other changes which take place in the mouth. Food undergoes a chemical change which is completed in the stomach and this is of essential importance in aiding the process of digestion

The oesophagus is a tube commencing at the mouth and connecting with the stomach and is about eight or ten inches long It is made up of three coats, Muscular Cellular

and Mucous. the Muscular or
outer coate being somewhat
Thicker than the others
The stomach is a long round
and some what irregular shaped
sack It is placed on the left side
of the abdoman just below and
with in the lower ribs and runs
crosswise toword the right side. It
has two openings one toward the
left end where the gullet ends
and the other at the right end where
the stomach opens into the alemen
tary canal This organ is very elas
tic and varies much in size in
accordance to the amount of food
taken into it. It has been so much

distended at times to be able to hold two or more quarts this is apt to be the result after one has taken a hearty meal or when a great amount of liquid has been taken into the stomach. At other times the stomach has been so reduced as to barely hold a pint this condition is generally found to take place in persons who do not get enough to supply the cravings of nature. It usually contracts itself down to its contents however small The stomach is never completely empty there is always some fluid substance remaining in it. The size of the stomach

is said to vary with the habits of men and the kinds of food used. It is claimed to be longer in those who confine themselves strictly to vegetables than in those who live on animal food the vegetarian gets less nourishment from his food and is compelled to take a larger amount to supply the requisite nourishment & starving persons while the man who uses animal food can get more nourishment from a smaller bulk. Persons who are in the habit of taking indigestible food have larger stomachs than those of temperate habits

The texture of the stomach is of a fleshy character very soft and flexable and consists of four coats each of which have a distinct part to perform in the digestive process and each is prepared for its own function, the outer coat gives support to the whole the middle coat expands and contracts to give due size to the sack it also produces motion in the stomach which agitates the food and helps promote the work of digestion and aids in expelling the contents when they are digested

The inner coat exudes upon its surface a slimy mucous sub

stance which protects it from all substances which would irritate it and also prepares the gastric juice a powerful fluid which dissolves the food. It exerts a powerfull action on all natural sorts of food It dissolves certain important elements which form a part of nearly all our food By its aid the finely devided mass is reduced to a condition fit for the absorbtion of the nutritious portions into the blood and by the blood carried throughout the whole system replacing the waste and supplying nourishment to the growing tissues

As soon as food is swallowed some gastric juice is found out upon the lining membrane of the stomach, and this maybe comes softened the more completely the food has been masticated the more readily the gastric juice is absorbed. At first it only mixes with the superficial particles and these being removed more particles are exposed and so the work goes on until all the food has been wet and softened by this powerful acting agent. The stomach is not always full of gastric juice when it is usually none of this fluid

to be found in the stomach except when there is some thing in it, to excite and cause the lining membrane to secreat and pour it out. The Gastric juice is not found out with a rush but it oozes out slowly (very much like the perspiration which oozes from the forehead) until there is enough to mix with the new morsels which are taken into the stomach the juice commences to flow as soon as the food reaches the stomach and continues to flow if stimulated by new morsels this flow is slow even not with out end

This liquid cannot like saliva in the mouth be made to flow as long as we desire it flows then not in proportion to the amount of food we eat but in proportion to the amount of nourishment which the body needs therefore only so much of this juice is poured out as will dissolve what food be needed at one time. therefore the stomach may be likened to an acute measuring machine as it measures by the gastric juice the amount of food the stomach is able to digest with ease and when there is enough food taken into the

body. The stomach seems to give the signal that it has had enough to supply its demand. By being careful we can supply the exact amount to the wants of the stomach and stop as soon as this want for food ceases for it is nothing more than natural to feel the pangs of hunger. It is through the medium of the stomach makes its wants known. The time required by the stomach varies according to the amount and kind of food taken in to the stomach. Many of the foods that are taken in the stomach are more readily acted

upon by gastric juice than others digestion however commences as soon as food reaches the stomach and continues from one to five or more hours. When the stomach has finished its work the food is converted into Chyme and to us it seems to have the same appearance throughout there seems to be no traces of the meat and vegatables which entered the kind and this was the sciance that was taught by the old teachers But now the microscopical researches have set aside this mode of teaching and that the mass

is not all the same but that this mass is submitted to further digestion in the small intestine When the stomach has finished its opperations on the food it is then turned over to another agent of digestion Namely the Duodenum, by pressing the pyloric opening into this other preparatory room; here it undergoes another change and is acted upon by a fluid known as the intestinal fluid or juice and also by the pancreatic fluid this latter fluid enters into combination with all the elements of food but

more especially the oily matters which have not been acted upon by the gastric juice and prepares them for the use of the blood. These three digestive fluids constitute a milky fluid known as chyle which is yet in the alimentary canal Chyle is a milk white fluid which coagulates spontaneously and on standing separates more or less completely into a clear part

The nerves carry the feeling of hunger from the stomach to the brain where it is felt and recognised no such sensation is

felt and no feeling of hunger is convrighed if the nerves are diseased the appitite is always felt in the brain but is not perceived unless we can give attention to it - the appitite is affected by the state of health both in the body and mind In fevers and certain dyspeptic states the stomach crews little or no food, so in sorrow or mental distress and may also be affected by the announcement of the death of some nearfriend. Hunger according to Prof Miles consists of a twofold meaning, one where the

system requires food and the other a local feeling of the stomach. In olden times hunger was thought to be the rubbing together of the walls of the stomach, but different views have been advanced from time to time until now it is thought to be the contracting of the stomach upon itself which produces this feeling of hunger.

The feeling of hunger is essential to the maintainance of life for food is required to give power to the tissues and muscles and to supply

the growth of the various parts with nourishment. The general feeling of hungar is an important one and should never be overlooked. Some times just before death you will hear a patient complain of a feeling of hungar.

The appitite may be aroused by the smell of some good thing cooking and we all know how our mouths water when we smell some thing good and how we long for some and the salivary glands secrent freely although there

is nothing in the mouth to cause them to do so. When the food has been digested the nutritious particles are then taken into the body by absorbtion. In the process of absorbtion the fats etc that have been taken into the body are acted upon by the Bile and pancreatic juice. The fats undergo two changes when taken into the body exactly how the fats are absorbed is not clear most of the fats get into the lacteals as oils and not soluable soaps as was once thought to be the way The blood vessels are

also thought to have some part in the function of digestion. The nutritious parts of the digested food is carried from the digestive organs in the abdomen through the absorbent mouths and lacteals tubes and the great lacteal tubes duct to the veins near the heart where it is mixed with and becomes a part of the blood. This blood is then carried to the lungs where it undergoes certain changes and then is distributed to all parts of the system for repair and building up of the tissues. As the eating and digestion of food have no

other object in view than the supplying the wants of the blood. This fluid must have an abdulus for the transportation of this fluid from one part to another and is known as the circulatory apparatus But a lengthy discription of this subject would be out of place here.

From this examination of the structure and uses of the various digestive organs of the human system we learn that the stomach supplies some of the most delicate operations and effects some of the most wonderful changes in nature. in these operations it requires the aid of the intelligent hand to supply its wants and fit the sub

ply - There is no human instinct to be our unerring guide and to direct us how much we must eat and drink, the living machinery within and the dead material without our bodies are prepared for our use and the law of nature is declared to us for our government. And this law we are required to understand before we can perform our part in the sustainance of our frames. This is not a law of appetite that directs us always to take food when we are hungary and take such kinds of food and as much of it as the palate craves nor is it a law of convenience that allows

such food as chance or fancy may place before us. This law is founded upon the structure of the digestive apparatus and the wants of his frame, temperture, age and his habits of exercise. In the many different rules and laws laid down for the government of all men of every variety of temperture and habit and location and which attempt to sustain all men with are absurd and fail for every man or every class of men have their peculiar powers and peculiar wants and if they disregard these

and endeavor to supply life by any other means or rule they will not fully accomplish the purpose of eating. As the mind needs the body for its earthy home so the body needs the mind for its director. This responsibility for the care of the body and mind comes upon every one in every condition of life and whosoever discharges it with intelligence and faithfulness will increase his powers and his enjoyments and have length of days on earth.

Masturbation.

by

E. F. Corbell

-1886-

Masturbation:

This evil is also termed Solitary indulgence, Self abuse, Onanism, Venereal Debauchment, Voluntary Pollution. The functions of the sexual organs are greatly impaired by the unnatural excitation of the genital organs by friction with the hand. It is a deplorable fact that this vice is sometimes acquired by boys, before they reach their sixth year. In some instances the habit may be attributed to foolish or vicious nurses, who quiet children when they cry by tickling their sexual organs. These witless persons may not know how dangerous such a practice is to health and morals, or how easily the child is overcome by

his propensities. It is wrong to omit these important hints to the keeping of those who may easily transform a naturally healthy desire into a precocious morbid sensibility that will eventually ripen into a degrading animal lust. Untold are the miseries which arise from masturbation. Self abuse is one of the most prolific sources of evil, since it leads to degradation of body and mind. It is practiced more or less by both sexes and the habit once established, it is with the greatest difficulty that it can be overcome. It is the source of numerous diseases which deranges the functional activity of the organs

and eventually impaires the mind & constitution. This solitary vice is mostly practiced by those ignorant of its dangerous results, and diseases are incurred when it is too late to redeem the broken down constitution. Immoderate indulgencies in any practice are deleterious to an individual. Emphatically true is this with regard to sexual excesses. Not unfrequently does the marriage vit cover a multitude of sins. The abuse of the marital relation produces the most serious results to both parties, and is a prolific source of some of the gravest forms of disease - Prostatorrhoea, Spermatorrhoea Impotency, Hypochondria & general

debility of the productive organs, arrise from sexual Excesses. Boys seem to regard the practice of this vice, like the vile habit of smoking and chewing tobacco, as a manly accomplishment. It is evident that they act under the impression that the practice of self-polution indicates their near approach to maturity, and thus they vie with one another as to who shall first succeed in awakening his sexual sensibilities sufficient to give unmistakable evidence of his masculine attributes. One boy may inherit a predisposition to this practice, or his sexual feelings may be awakened

at an early age, and his bad ex
ample be imitated by many others.
In this way a dangerous habit
is early acquired, and when the
sexual propensities are habitually
indulged to the exclusion of the
cultivation of higher and nobler
pleasures, if not rendered impotent
by these abuses, he will transmit
the same desires to his offspring,
so that the propensity and habit
becomes irresistible. a physical as
well as a moral rock or disease.
The earliest account of man reveals
the fact that his creator did not
design him to live in seclusion;
for we find him with his helpmate

in his Eden-Home. History shows that when a man has been deprived of the society of woman he has become reckless, vicious, depraved, and even barbarious in his habits, thus illustrating the sentiment: 'It is not good for man to be alone.' Good associations promote mental and physical development physical because the body can't be perfectly developed unless the mind be cultivated. The development of a person implies the unfolding of every power, both physical & mental. Nothing so regulates & restrains passion as a healthy

condition of the organs through which it finds expression - and every organ of the body is powerful in proportion to its soundness - The propensities play a prominent part in the education of the child - When properly disciplined and held in subordination to the higher faculties, they constitute an important factor in the Economy of man - Boys, are more liable to be morbidly excited when excluded from the society of girls, and vice versa - Again, when the sexes are accustomed to associate, the passions are not apt to be aroused, because of the natural,

antagonizing physical elements.
The influence of one refines, energizes
and enobles the other children
should be taught to understand
their natures, and knowing them
they will learn self government
It has been truthfully said: "As
man rises in education and moral
feelings, he proportionately rises in
the power of self restraint; and
consequently as he becomes
depraived of this wholesome law
of discipline he sinks into self
indulgence and the brutality of
savage life - The passions may
be aroused by the language, appear-
ance or dress of the opposite sex

A word spoken under the impulse of passion is often rendered in a very different version by one whose passions color the thought, and made to convey an impression wholly unlike that which was intended by the speaker. So, too, the dress may be of such a character as to excite the animal nature. The manner in which the apparel is worn is often rendered so conspicuous as to become bawdy, thereby appealing to the libidinous desires, rather than awakening an admiration for the mental qualities.

Literature is a powerful agent either for good or evil. If we would

improve the morals, choice literature must be selected, whether it be that which realizes the ideal, or idealizes the real - Obscene books, or literature written for the express purpose of intensifying sexual desires in the young goads to an illicit gratification of the passions, and ruins the moral & physical nature - It not unfrequently happens that a child is born with a vigorous mental organism which gives promise of a brilliant future, but manhood finds him incompetent, debilitated, - and totally incapacitated for mental or manual labor -

This may be the result of youthful indiscretion, ignorantly committed, but not unfrequently it is the effect of a pernicious literature which inflames the imagination, tramples upon reason, and pictures to the youth a realm where the passions are the ruling deities. Many persons are born into the world with disordered organizations for which they are not responsible. Such are entitled to the sympathy of humanity. Dyspepsia, Scrofula, consumption, and a thousand ills to which mankind is heir, are transmitted from parents,

the results of ill-assorted marriages. Children of healthy parents, who have good constitutions temperamentally adapted, are usually healthy and intelligent. Frequently in a family of children, who have the same parents, there are marked varieties of characters. One manifests great precocity, another is below the average in mental attainments; one is amiable, the other irritable in disposition; indeed, there are often as great differences in children of the same, as of different families.

This is due to the physical & mental condition of the parents, more especially the mother, not only at the time of the genesis, but also during the period intervening between conception and the birth of the off spring. We are told that the ancients regarded courage as the principle virtue. Be us purity is so esteemed. Personal purity is an essential requisit to the growth and perfection of the character. Purity, is inward, secret, self-sufficient, thoroughly & intimately personal, in proportion as one resists temptation, is he virtuous. The practice of onanism

squanders the vitality & bankrupts
the constitution- indigestion, inanition,
emaciation, shortness of breath,
palpitation, nervous debility and
all symptoms of this exhaustion
Subsequently, the yellow skin
reveales the bones, the sunken eyes
are surrounded by a leaden
circle, the vivacious imagination
becomes dull, the active mind
grows insipid, in short, the
spring, or vital source, having
lost its tension, every function
wanes in consequence. Excessive lustful
enjoyment produces feebleness, and
finally terminates in disease
and impotency- Masturbation

perverts the excitability of the nervous system and sexual organs and causes debility, which is indicated by the premature discharge of semen during sexual intercourse. These premature emissions indicate not only partial impotency, but also that the nerve-centers have become morbidly sensitive by the practice of solitary vice, or marital excesses. At length the powers of the erectile tissues are diminished, and there is weakness at the root of the penis when erect, thus preventing the act of copulation,

or the erection may be slow and not last long enough, on account of a faulty functional condition of the spinal chord. This condition is sometimes associated with a morbid irritability of the urethra, which, being inflamed, may become sufficiently constricted to prevent the emission of semen when the penis is erected, causing it to pass back into the bladder. The inflammation may extend downwards to the prostate glands, and cause a discharge of thick, sopy, acid slime. Masturbation perverts and finally destroys the secretory

functions of the testes. It sometimes causes chronic inflammation, which may result in obliteration of the minute seminal canals, or obstruction of the conveying ducts. The sperm is imperfectly elaborated & totally unfit for procreative purposes. Sometimes the spermatozoa are entirely absent, and when present, are very few in number, incomplete in structure, diseased, and deficient in power as well as in organization. The husband may appear to be healthy, and his inability to procreate may be erroneously considered a defect in

his wife- Symptomes: Irritability, impatience and restlessness, loss of flesh, pallor, and a timid downcast look- There is loss of memory and the intellect becomes enfeebled, They are depress-ed in spirits, easily discouraged, and prefer solitude- They do not retain what they learn, the gener-al health failes, and the nervous system showes serious impair ment, The symptoms are too sig nificant to deceive the experienced eye- The short irritable replies of the boy & his general unwillingness and nervousness are indicative of the loss of nerve power, occasioned

by this bad habit various com-
-plications are likely to arise
in the progress of this terrible
malady. Tumors, which sometimes
degenerate into cancerous disease of
the testicles & finally result in
death are not uncommon
Stricture of the urethra, Hydrocele
Varicocele, are all common
complications. Sequelae, which
are of the most consequence are,
Spermatorrhoea, Seminal weak
-ness, Nocturnal and Diurnal
emissions and frequently act as
the cause of spinal affections.
Treatment: The best is prophylactic.
The child should be forewarned

by ill parents of this destruc-
tive tendancy & that such a prac-
tice resultes in calamities that
will embitter the whole life.
Parents hesitate to talk to their
children, because they fear put-
-ting impure ideas into innocent
minds. Their hopes are strong
that their children will never
indulge in so degrading a
practice. If however the habit
has been formed, the first
thing is to see that the child
quits it, for if he or she
continues it, nothing will be
of any vail. Hygienic Treat:
Daily physical exercise and regular

habits must be established. It is important that the mind, as well as the physical powers, be directed into active and wholesome channels, There must be restraint and discipline. It is useless to begin medical treatment while the patient continues to read exciting, amorous stories and obscene books, which are suggestive of evil thoughts. Something practical ought to occupy the thoughts and engage the hands. Regular and vigorous physical exercise is necessary to assist the circulation of the blood and compel its determina

-tion into the minute and
extreme parts of the vascular
system. When blood is thus directed,
nutrition is more vigorous &
the activity of all the functions
is augmented. Not only should
there be regularity in eating, but
sound discretion should be exer-
cised in selecting a plain
wholesome diet, consisting of such
articles of food as best favor a
daily & free evacuation of the
bowels. All of fatty, spiced
food, stimulating drinks, and
tobacco in any form should
be excluded. At night the patient
should merely take a little

ice milk; and should drink very sparingly, since fullness of the bladder is apt to produce erections. The patient should sleep upon a hard matress & pillow, be lightly covered, and not assume the dorsal decubitus; he should not sleep too long, & must avoid taking a siesta during the day. Early rising and cold baths are very beneficial: after bathing rub the surface of the body well with a rough towel until reaction is established. Douches, or showering the genital organs with cold water over

or thice a day is very beneficial, but should not be done just before going to bed, it is well to bathe the head in cold water. Horse-back riding, climbing and all exercises which rub, chafe, or excite the genital organs should be avoided - Even the clothing should be loose, so that walking will not produce friction or cause any excitement of these organs - The calles of nature should receive prompt attention, and the urine be voided at any time when there is an inclination. If there be any irritation of the bladder & lower bowels,

injection of cold water into the bowels will be very beneficial, as it will reduce heat and subdue irritation.

Medicinal Treatment:

This must be both local and general. Among the internal remedies or general treatment Quinine and Iron are useful in anaemic subjects. camphor; lupulinae oleoresina (in dose v - x min.) morning and evening. Good effects are also obtained from belladonna (administered in the form of extract, internally or in suppositories) and atropine

(the dose being cautiously increased) – Fowler's solution is an excellent sedative of the genital functions. It may be given for a long time, in v gtts. doses, before going to bed. Bromide Potassium stands at the head of the list of the remedies for lessoning the sexual power. It acts as a sedative upon the secretions. Lallemand recommended cauterization of the prostatic portion of the urethra by means of a stick of nitrate of silver, concealed in a catheter. two or three cauterizations

repeted after an interval of
two or three weeks, will
generally suffice - Dittel (Vienna)
recomends a less painful
and more certain remedy,
consisting of the introduction
with the caustic holder of a
urethral suppository of butter
of cacao and nitrate of silver,
its position, being determined
by the rectal touch - We may also
resort to the intermittent in-
troduction of elastic or wax
bougies, coated with belladonna
ointment. The urethral canal
is almost always hyperaes-
thetic. Painting the prepuce

with Churchill's Tinct. Iodine repeatedly will render the penis too painful for the patient to handle; and in this way it will do good. Employment of electricity is often resorted to, and with great good resulting from its use, the anode of the battery of moderate strength is placed upon the lumbar regions, and the cathode is applied for three or four minutes along the spermatic cord, the perineum, and penis. Too prolonged or frequent sittings are injurious.

In women who indulge in the deplorable habit of delectation or self abuse. There is only one thing that will produce a radical cure and that is excision of the clitoris, (and all surgeons recommend it) - The treatment of this disorder is rather in the direction of moral means, keeping the patient somewhat under restraint; and medical, such as the internal use of bromide pot. Then the clitoris may be touched with caustic or cantharides, or Tr. Iodine so as to render it too painful

For the patient to handle

E. F. Corbett.

"Carcinoma" or "Cancer"

Carcinoma is a malignant Epithelial growth, having a definite anatomical structure, therefore every tumor that possesses the Argus of malignancy must not be called cancer simply from its malignancy.

Cancers according to the older writers, were divided into Scirrhus, Colloid, and Encephaloid, each of which contained as its anatomical elements fibers, fluid, and cells. The fibers are made up partly from preexisting and partly from newly formed tissue, and made up a frame work in which the cancerous cells lie and then, we call

the Stroma. The fluid is exuded serum. The cells are larger than white blood corpuscles and should not be confounded with them even though the older authorities supposed that cancer always developed from a morbid growth in the migrated white blood corpuscles. The division of Cancer into Scirrhus Colloid and Encephaloid must be regarded as a difference of degree and not of kind since they all contain the anatomical elements but in different proportions. Scirrhus is composed mainly of a fibrous tissue with little fluid and comparatively few cells. This is the [illegible]

Cancer, and this hardness is due to the connective tissue element that preponderates in this over that in the other varieties.

Encephaloid is the highest development of carcinomatous formations, it consists of an abundance of abnormal multiform cells and a peculiar fluid. Encephaloid is one of the kinds of soft cancer, grows more rapidly and is more apt to show cutis of disintegration than the other varieties, occurs in any part where cancer may develope.

The softness of this variety is due to the small amount of stroma and the excess of cancer cells,

these cells are usually smaller than in the other kinds of cancer. This variety is more malignant than the others and its malignancy depends upon the excess and smallness of the cancer cells of which it is composed.

Colloid cancer has a variable amount of fibrous tissue arranged as a matrix containing a jelly-like substance; cells are also formed in it but in a less proportion. It may simply be regarded as one of the other varieties which have undergone colloid or mucoid degeneration; hence a secondary growth, it is less acute and not so malignant as the other varieties and may be regarded

tissues of the epithelial cells. Owing to the small amount of stroma, which they do some-

times even destitute of they are more malignant than the other varieties. Flint believes that carcinoma is purely local in its origin and is not preceded by any dyscrasia, the cancerous cachexia following the development of the primary and secondary growths.

The cells of carcinoma resemble gland cells but are larger, they are held to be distortions and are homologous with other cells found in the body, yet they are of such forms as do not normally belong to the part, being produced by morbid alterations of its natural elements. The difference in shape that we

find in cancer cells is mainly due to the mutual pressure that they are being crowded together in their development exert upon eachother. Hence we find them in almost any form, and each having its nucleus and nucleolus. These cells are crowded together abnormally in the meshes of an imperfectly and irregularly distributed connective tissue. Classen expressed it as his opinion that cancers in general always originate in a morbid development of migrated white blood corpuscles, but this has not been substantiated by later ~~Path~~ Pathologists and that which seems

to be pretty generally agreed upon is that these growths are due to a modification in the cell multiplication of ordinary epithelium, but whether this epithelium formerly existed as epithelium or was developed from cells belonging to the connective tissue is a question still subjudice. Cancer of the uterus and testes might at first glance seem to contradict this theory of the Epithelial origin of this in these parts ~~but when we consider~~ since they are developed from the mesoblast, but when we consider that the uterus and seminal vessels are lined with Epithe-

lum we still see that the theory holds good.
Primary carcinoma of those parts destitute of Epithelium is accounted for by the supposition of this theory in this way; namely, that some Epithelial rudiment in foetal life has been nipped off and inclosed in the mesoblastic development and here it remains until some lesion or over nourishment to the part causes an increase in the cells of this rediment, and they breaking down the barrier or restraint and growing in the direction of least resistance set up inflammation and gro-

rise to cancer. Growing in this way the carcinomata never become encapsuled, but infiltrate the surrounding tissues ~~and~~ no line of demarcation being formed, hence the great difficulty in dealing with this kind of malignant growth. Granting this theory to be correct the infiltration must be due to the crowding together of the cells, and that everything must give way before the neoplasm.

In this way a wart may become carcinomatous.

Within the stroma are contained the blood vessels which are often very numerous and form a close

network around the alveoli, the blood vessels never pass into the epithelial masses but are limited to the stroma. This distribution of the blood vessels is important as distinguishing carcinoma from Sarcoma, though there are some varieties of Sarcoma which are exceptions to this rule. The changes that take place during carcinomatous growth are numerous, among them may be mentioned, Fatty degeneration, Calcareous deposits, and formation of Scar tissue. Fatty degeneration is one of the most common changes in Carcinoma and this change takes place principally along the lobes

of the tumor hence the more rapid the growth the greater the degeneration. The calcareous deposits are made in the stroma.
We often have scar formation in one part of the tumor and the disease go on unchecked in another.
The natural tendancy of the disease is to extension by means of the Lymphatics and to enormous and unhealthy formations, which unless it and the glands involved be removed must sooner or later prove fatal by the extension of the disease to some vital part, or by making such a demand upon the patients system

that his vital powers gradually fade away and he dies from exhaustion. Though the natural tendency of the disease is to extension by means of the lymphatics, still in the encephaloid variety fatty degeneration may take place to such an extent as to destroy the connective tissue enveloping the blood vessels and the vessels themselves becoming involved offer little or no resistance to the cancerous infiltration, and the morbid cells becoming detached get into the circulation. Getting into the blood they are carried along by it until they meet with some obstruction to their onward pas-

sage and there undergoing cell multiplication they set up the disease anew.

One of the great difficulties dealing with Carcinoma is not being able to recognize all the tissues involved in the morbid process and again having recognized them not being able to remove them. Hence after the removal of the growth we are liable to have the disease showing itself in some other part of the body generally in the neighborhood of some gland. At best a favorable termination can only be hoped for. It is often difficult to differentiate Carcinoma from

Sarcoma until some of the [illegible]
fed growth has been examined
microscopically and by [illegible]
perienced [illegible]. Those who
are accustomed to operate for
the removal of such growths
will often differ in diagnosis
by mere inspection and palpation.
One case that I have in mind
was brought into [illegible] clinic at the
hospital and the surgeon in
charge of the clinic expressed the
opinion that it was a carcinoma
from its general appearance, being
excavated and crater-like and not
bleeding, and from the edges of
the growth projecting out over the
skin, though stating at the same

time that being unable to detect any glands involved might lead to the opinion that the growth was Sarcomatous. The surgeon who operated for the removal of the growth called it Sarcoma because when operating he was unable to find any enlarged glands; the miscrope however showed the growth to be Sarcomatous. As a general rule Sarcomas are attended with little or no pain, but if there is pain it depends upon the extension of the disease to tissues well supplied with nerves

Though Flint does state that the origin of Cancer is purely

local, yet we certainly recognize in many cases an hereditary predisposition to it and this would lead to the conclusion that in these cases at least it was constitutional in origin. ¶ It is even stated by some authorities that a cancerous cachexia is recognized in many cases, even before the development of the primary or secondary growths, and that its most obvious sign is a sallowness of the skin.

As regards the local origin of cancer, a cancerous is a favorite place for its development and in the majority of such cases we can obtain no family history of cancer,

and the patient otherwise apparently in the best of health, in such cases surely the disease is local in origin.

Carcinoma is much more frequently found in Women than men, and in the Uterus much more frequently than in any other organ.

Cancer usually develops after 40 years of age but may occur at any age, as cancer of the Testes which is more frequently found in the young and especially in boys before the age of puberty.

The choice of the different parts seems to be as stated and the following order, viz, Uterus, Mammal,

Stomach, Rectum, Lymphatic Glands, Liver, Bones, Skin, Brain, Eye, Testicle, Ovary, Tongue, Oesophagus.
A large majority of the cases of cancer of the uterus are found in women who have born children, hence supposed to be due to injuries sustained during parturition
Cancer of the mammal is more in women who have born children.
I have seen quite a number of malignant growths about the mammal and with but two exceptions they have been carcinomatous; these two were sarcomatous and the other doubtful. All that I have seen op-

ated. for have been of the Scirrhus variety, and this is the kind that most often comes under the notice of the general practitioner.
Scirrhus cancer seems to prefer especially the Mammal, Stomach, and Intestines; Colloid, the Stomach, Rectum, and Peritoneum; while Encephaloid may occur in any organ, it alone attacks the Liver, Kidney, Lung, Testicle, Eye, and Lymphatic Glands.
Carcinoma of the liver is always fatal and usually runs its course in a short time. Cancer of the internal organs is largly due to scars from Syphilitic lesions.

Each sex seems to be alike liable to cancer of the Stomach.
Cancer of the Oesophagus is much more common in men than in women, though it occurs at an earlier age in women than it does in men. The frequency of the affection in this situation in men is supposed to be due largely to the irritating drinks taken by them, which being swallowed by them set up inflammation and this being followed by ulceration we will have a scar formed and the disease will be developed in the scar tissue again in scar due to cancer of the Oesophagus, cancer being also more common in

then than in women.
Carcinoma may disappear by spontaneous degeneration, but this however is very seldom seen. When once it makes its appearance the tendency is to become worse.
The only hope we have for cure is in the surgeons knife and even it in very many cases fails; yet even though it may fail as far as a cure is concerned still it may give the sufferer a period of immunity from the disease in which he or she may be in comparative comfort
Thus,— Mrs.— aged about 60 was brought into the Dundee

clinic for removal of the breast for Scirrhus Carcinoma. Three years previous to this time she had had this same breast operated on for the same trouble, at that time she was suffering intensely with pain in her breast, after the operation she went for nearly three years suffering no inconvenience whatever. Other cases of this kind might be cited but as a rule the operation for cancer should not be attempted unless there are hopes for the patients ultimate recovery.

The time for operating is as soon as the growth is recognized

and the patients system at
large is in proper condition,
as however those growths that
are within reach of the knife
generally
make their appearance in those
who are otherwise in good
health the time for operating
on them is as soon as they are
recognized. In general however
if the neighboring glands are
found to be very much in-
volved an operation is hard-
ly to be thought of.
In operating the surgeon should
not be too sparing of tissue
as they may be involved be-
yond what he can appre-
ciate by merely feeling them.

For the relief of pain poultices and hot applications are not to be thought of as they tend very materially to hasten the progress of the disease. Belladonna or Opium plasters however give marked relief. Caustics have in some cases where the knife could not be used done good, but they are to be regarded as secondary to the knife, and they do not seem to have met with much favor. The local treatment may be regarded as removal, and the general as addressed to the system at large, good food, fresh air, cheerful society, Tonics &c.

When it is not proper to operate then the patient should have the same constitutional treatment, and anodynes for the relief of pain, Especially the Opium or Belladonna plaster, and a plenty of raw cotton for protection, remove as far as practicable all sources for irritation, and render the patient as comfortable as possible

Edward [illegible]
[illegible]
[illegible].

Rheumatism

L. H. Burchinal
1886

Acute Articular Rheumatism.

The term rheumatism is derived from the Greek word "rheuma" which literally means to flow. Ordinarily employed, "it is a broad, general term that includes many affections and covers much ignorance." Properly defined, as a specific inflammation affecting the fibrous structures of the larger joints, and other fibrous structures of the body with a peculiar tendency to involve the heart. Locally manifested by heat, redness, pain and swelling in the affected joints.

It is accompanied by intense pyrexia, and constitutional disturbance. The Acute forms very rarely become

Chronic. It is a systemic disease and is self-limited.

Morbid Anatomy. Death rarely affords us the opportunity of making an examination of the affected parts - the joints.

It is said, that when symptoms are well marked in life, but little change is noticed after death. But by inference, we believe there is thickening of the synovial membranes from the hyperaemia and serous infiltration.

The synovia is increased, more or less turbid mixed with pus-cells. There is an excess of fibrin factors in the blood, as shown by tests.

Instead of having three or four parts of fibrin to the thousand parts of blood, as in health, it is increased to eight or ten parts to the thousand. This increase of fibrin-elements passing through the heart has a tendency to deposit some of it on and around the valves of the left heart - as the valves are in a state of inflammation - being fibrous in their nature. These deposits are found on post-mortem as vegetations which are agents of a very serious nature in many cases.

Why it is that the left side of the heart is alone affected by these deposits of fibrin, is not known

Clinical History.

The attack may come on gradually, after some days of indisposition. But this is not the rule rather the exception. In most cases the onset is sudden and at night. Chilly sensations or a distinct chill with high fever which in many cases precedes the attack for some time. The temperature may be out of proportion to the severity of the other attendant symptoms.

It usually ranges about 103 5° F.

The pulse is full and bounding, but rarely exceeds ninety beats per minute in an uncomplicated case.

The disease is most locally manifested by intense pain in one or more of the larger joints.
Usually the knee ankle wrist elbow, or metacarpo phalangeal joints are first attacked.
There is increased heat and redness in the part. It is swollen sometimes extremely so.
The affected joints are very sensitive the weight of bed clothes causing pain, and patient will keep the position for hours in order to avoid pain which results from motion.
The swelling is due to an increased amount of synovial fluid and effusion into the structures around

the joints, It is most prominent in those not covered by muscles, as the knee, elbow wrist etc.
One striking peculiarity of articular rheumatism is its tendency to leave one joint and attack another. It will leave one part suddenly and attack the joint corresponding on the other side of the body. Sometimes parallel joints are affected - hence arises the "rheumatic law of parallelism." If the attack suddenly leaves a knee we may expect the other knee to take on inflammation in a short time, or it may go to the elbow, a joint similar to the knee.

This law is almost invariable.
In an analysis of 21 cases which presented 88 instances, there was but a single exception to this rule, as reported by Dr Austin Flint.
The tongue is frosted, but is seen covered with a thick creamy coating, more or less brown.
This coating is almost characteristic and lasts throughout the disease. The thirst is increased, and appetite greatly impaired, or entirely lost.
Pain in the head and delirium are not common and when present denote some cerebral complication.

Sweating is a peculiar feature of this disease, and lasts during the whole course of the affection.
It has a sour disagreable odor and is most abundant at night.
The sweating differs from that of many other diseases, in that it does not alleviate the suffering in the least.
The patient feels as badly after as before it had occurred.
Sudamina may occur on the neck and trunk, produced by the moisture. The urine is scanty and high colored, and deposits urates on cooling.
Owing to an increase of the

pigment the deposit of urates is of a "brick dust" color.
The saliva becomes acid.
Sleeplessness is a source of discomfort and more or less prostration from the pain and frequent perspirations.
The bowels are usually constipated.
In general, the strength is well preserved. Anaemia is produced early in the disease, as indicated by the sallow skin and the blood-murmurs heard with the systole of the heart and with greatest intensity over the 2nd intercostal space on the right side of the sternum. In other words at the base of the heart.

The anaemia is due to the peculiar poison circulating in the blood.
Ultimately, the most important feature of this disease is, the liability of the fibrous structure of the heart to take on inflammation.
The inflammation is usually limited to the Endocardium and Pericardium of the left side.
Endocarditis is the most frequent. It occurs in about 20 per cent and Pericarditis in about 14 per cent, (of each one hundred) attacked by acute articular rheumatism.
The immediate effects of the heart complications are not serious, but after some years they often

cause most disastrous consequences. Endocarditis is the one most to be dreaded.

The general symptoms disappear gradually, but there is a sense of uneasiness in the joints with neuralgic pains for some time afterwards.

The effusion is slowly absorbed, but the ligaments seem to be softened and the motion of the joint is interfered with for some time. It is usually only temporary, and soon the function of the part is fully restored. This impairment is a result of the inflammation.

Etiology.

The causes are predisposing and exciting. A distinct heredity can be traced in about 30 per cent. It may be congenital inherited or aquired. Be this as it may the rheumatic diathesis is present Age is a predisposing cause, as it rarely occurs before five or after forty years. If it occurs after the latter period - it is not a primary attack

The disease occurs usually between fifteen and thirty years of age. It may attack persons much earlier. Prof Chew relates a case of a little child who died

from it at the age of eight mo's.,
As to sex - males are more liable
as their avocations necessitate more
exposure than that of females.
Again, it is most apt to attack
the weak, and broken down - who
live in dark damp and ill-ven-
tilated houses.
Exciting causes are cold and
damp. These, act by checking
the secretions of the skin, thereby
retaining the peculiar and sub-
-tle poison, which lights up
the attack, as cold does a pneu-
monia.
The proximate cause however
is undoubtedly the specific

poison circulating in the blood.
This poison is almost universally believed to be a form of lactic acid. This has been shown clinically in the production of acute rheumatism in the administration of lactic acid to Diabetic patients.
The acid is partly generated in the muscular elements of the body. hence it is called sarcolactic acid. It is in combination with the acid phosphate of potassium.
Experimentally the presence of this acid has not been demonstrated, but "in therapeutic management of the disease based on the presence

of an acid in the blood is more effectual than any other method known at present."

Diagnosis.

A typical case cannot be mistaken for anything else, but it may be confounded with either of the following affections, viz: Gout, Pyaemia, Hysterical Joint Pain, Simple Synovitis or Gonorrhoeal Rheumatism.

To distinguish from Gout. The essential causes of both depend on an acid in the blood. In Gout it is uric acid - while in Rheumatism it is lactic acid. Gout is a disease of advanced life

and is excited, and brought on by luxurious living and especially drinking malt liquors.

Rheumatism is a disease of early life, and influenced by cold and the vicissitudes of weather.

It involves the larger joints.

Gout the smaller, usually confined to the metatarso-phalangeal joint of the great toe.

Lastly, there is the absence of the profuse sweats in gout, and is usually confirmed by a gouty history.

Pyaemia - is usually confined to one joint, characterized by hectic, great prostration, irregular

suppurate and the joint tends to suppurate. This order of things is reversed in acute rheumatism. The history should never allow any one to mistake this disease. Hysterical joint pain is differentiated by absence of fever, also of heat, redness and swelling in the part. Pain is only aggravated on examination and when patient's mind is directed to it.

Acute Arthritis (Simple Synovitis)
When confined to one joint is fixed throughout the disease, has slight fever no sweats nor heart complications, and recovery is more slow than in rheumatism.

Gonorrhoeal Rheumatism is excluded by the absence of fever, and the attendant gleety urethral discharge which is the exciting cause.

Complications and Duration.

The most common complications are: Endocarditis Pericarditis Bronchitis Pneumonitis Pleuritis and Cerebral Endarteritis.

The duration is governed entirely by the presence or absence of complications. Uncomplicated cases recover in from ten to twenty days, however it may be prolonged five or six weeks.

Cases recover within six weeks, on an average without treatment.

Prognosis.

Recovery is the rule, the mortality being only about 3 per cent. When death does occur it depends upon the hyperpyrexia cardiac complications or cerebral endarteritis.

Treatment.

As most every other disease rheumatism has undergone a revolution in the way of treatment within the last half century. Bloodletting blistering mercury to salivation and colchicum to the extent of producing vomiting and purging etc. etc. have all fallen into disuse as more effectual methods are known.

Hygienic regulations are very essential. The rooms should be kept warm and at an equal temperature all the time
Avoid all draughts of cold air and it is very necessary that the parts affected should be kept covered with flannel, or cotton wool over which is spread oiled silk.
Rheumatic subjects should wear flannel the year round.
The texture of the goods must be varied as the seasons indicate.
Rest in bed is important, and all sheets should be taken off and supplanted by blankets.
The diet must be simple and easy

of digestion, milk brings the best.
Since it is believed the prime
cause is dependent upon an acid
in the blood, we would by nat-
urally try to remove the cause
in order to cure the disease.
Now the chemical antagonists
of acids are alkalies.
And we do not look to these in
vain. for it is a well established
fact that the alkali not only
antagonizes the acid - but cures
the disease.
The alkaline treatment was first
systematically employed in this
disease by Dr. Wright in 1841. and
on a larger scale by Drs Garrod & Fuller.

Ward reports fifty cases treated this way which showed an average duration of only six or seven days. In no case was any heart complication developed after the patient had been under treatment 24 hours. By these statistics and thousands of others which might be enumerated, it is beyond doubt that the alkalies lessen heart complication. Can as much be said of any other remedy which has up to this time been used in this dreaded disease? It can not be said of the so styled specific of narrow minded men the Salicylates. Salicin and its compounds (rather) tend to - with

than frequent heart complication
The influence of Salicylic acid and
Salicylates on acute rheumatism
was communicated to the Medical
World by Dr Maclagan in 1876.
Salicylic acid has much utility in its
place to diminish the pyrexia
and became famic for its anesthetic
properties are undoubted.
It is apt however to produce gas-
tric disturbance if continued any
length of time and last but not
least it does not prevent the
dreaded inflammation about the
valves of the heart.
Hence from a logical standpoint
it would seem that better results

would be obtained by combining
the two most rival remedies of
the alkalies and salicylates
The bicarbonate of potassium bicar-
bonate of sodium and lithium
are the alkalies principally used.
It is necessary to give the alkali
in large doses and bring the sys-
tem speedily under its influence.
Commence with bicarbonate of
potassa gr. XXV-XXX and repeat at
intervals of three hours until the
urine is alkaline. When the urine
is decidedly alkaline, the dose
may be diminished, or the interval
of administration prolonged.
But the urine should be tested

from day to day, and when it becomes acid - increase the dose of the alkali.

For the pyrexia give the Salicylate of Soda. (as it is a less nauseous salt) gr. XX - XXV - three times a day, or oftener if required but it must be discontinued after two or three days at most, as it is a great cardiac and respiratory depressant and weakens the patient rapidly. The salicylate can be given in large doses for the alleviation of pain as well as the antipyretic effect. It is always well to combine the alkali with quinine in doses of gr. V - VII every

three hours. Better to give it intermediate the time of giving the alkali. which would make the intervals between giving the quinine and the potash one and one half hours.

Keep the patient on the alkali for some days or even weeks after the acute symptoms have subsided.

For the acute pain hypodermics of morphine. Begin with as small a dose as will relieve the suffering.

Secure sleep by chloral hydrate if the patient is full and strong. Otherwise use an opiate.

Quinine and salicylates for the hyperpyrexia. Do not use the cold bath as it is dangerous.

When delirium, coma and convulsions are present they denote grave cerebral trouble and we can only treat the symptoms. Treat the complications as they arise as would be necessary in a primary affection.

Locally keep warmth to the part - use some anodyne liniment. If the effusion tarries too long hasten it with "flying blisters." Wrap the joints in flannel saturated with a solution of Tinctura of Opium and subacetate of lead. Keep the parts covered with oiled silk or some non-conducting substance.

1886

CAPELLART

Inflammation.

Inflammation is altered nutrition of a part characterized by redness heat, swelling, and pain, with disturbance of function.

The phenomena of inflammation.

The redness is due to the dilatation of the vessels. The heat is due to an over amount of blood, and it is doubtful whether the blood itself is increased in heat. The swelling is due exudation of the elements

of the blood, and also to the exudation of serum from the vessels. In the cellular tissue from the stagnation of the blood in overloaded capillaries.

Pain, which varies according to the intensity of the inflamed part, is due to the pressure on the nerves. In loose tissue the heat is great, swelling rapid, and pain violent. In connective tissue, situated beneath fascia, redness and swelling necessarily slight, but pain great;

On account of tension. Inflammation, is acute and chronic.
When acute all of these symptoms develop rapidly. When chronic they manifest themselves more slowly.
With these local symptoms there will always be associated, some disturbance of functions, and what is of equal importance there will be some constitutional disturbance which is known as an inflammatory fever. This fever

depends upon the se-
-verity and character
of the inflammation
and its seat.
Causes are predispos-
-ing and exciting. The
former are such ten-
-dences as make the
patient liable to the
recurrence of inflam-
-mation; as sex occu-
-pation, and previous
attacks of inflamma-
-tion.
Exciting causes are those
which produce the
actual outbreak of the
disease, as irritating

substances, and wounds.
Inflammation spreads
about the system in
several ways, by con-
=tinuity, by contiguity
by nerves and by the
blood current, as in
cases of embolism.
Subacute inflam=
=mation lies between
the acute, and chronic.
The two terminations,-
a return to health by
resolution, or ab=
=sorption of the in=
=flammatory deposit
and the second, by
the death of the part.

Death may occur molecularly, when it is called ulceration, in the soft tissues and caries in the bony tissues.
In mass, which is called mortification, in the soft parts, and necrosis in the bony parts.

The pathology of inflammation.

The process of inflammation comprises changes in blood, vessels and circulation, exudation of fluid and of blood

corpuscles from the vessles, and changes in the inflamed tissues. Changes in the blood vessles, and circulation are essential to the existence of inflamma=
=tion, both in vascular and non vascular tissues. In the latter which comprise the cornea and cartilage they take place in the adjacent vessles from which these tissues derive their nutritive supply.
It has now been deter=

mined that no increased activity, no multiplication of tissue elements occurs as a part of the process of inflammation, but that on the contrary the process leads eventually to degeneration of vitality degeneration, and death.

Pus is made up of pus cells and pus cells are made up of dead white corpuscles.

Treatment.

Remove the cause, and put the part at rest. The treatment depends on a knowledge of the phenomena.

Whenever possible confine the part artificially, as by applying a splint. Elevate the limb above the heart, if possible. When irrigating always provide for carrying off water by oil cloths, so as always to have the patient neat.

By irrigation, lacerated limbs may often

be saved. Which would otherwise be inevitably lost. but care must be taken not to apply too much cold to injured parts. Never apply cold when pain is present. The sensation of the patient must be the guide. If he feels chilly, elevate the temperature of the water. It is often difficult to say from inspection, whether heat or cold is required. As a general rule, in bruises, open wounds, inflammation, or sturdy

constitutions cold is better, and in subacute inflammations occurring in weak persons, warm applications. In all cases let the sensation of the patient be the guide!

But how do heat and cold, being opposites, act favorable in the same diseases? Cold is depressing, reduces temperature, and circulation, and acts favorable on nutrition.

When the tissues are tough, heat moistens

and, takes off the pres=
=sure, thus allowing
the circulation to fol=
ow, relieving the irrita=
tion and pain.
Heat also favors ex=
=udation. Heat with
moisture is indispen=
=sible when inflamma=
=tion is in the act of
verging into suppura=
=tion. Yeast or poul=
tice. Flax seed makes the
best poultice, charcoal
may be incorporated with
flaxseed, as a deodorizer.
Sometimes mell. regulated

pressure may do good.
Vesication performs
a two fold work, it attracts
blood from part, and
attracts serum, and thus
diminishes pressure.
Vesication is usually
produced by cantharides.
Tiffany—
"In treating inflammation don't
treat simply the name,
but treat what you
have before you. Use
common sense. Well
regulated pressure is
good in some stages.

Pressure such as plaster-
-paris coating with cotton
between it and the
skin. It keeps the blood
vessels from dilating
and becoming congested.
Wrap the part with rubber
tubing and pass ice
water through it. It is very
good when the vessels
are dilating, but not
when pus is present.
When pus is present
let it out.
Give the patient enough
opium to make him
comfortable. If one
preparation will not

agree with him. give him such a preparation as he can take.

Fluctuation is a sensation appreciated by the fingers when there is a fluid in a sac under them, and you tap the part or press on it. You can get fluctuation across the belly of a muscle very often. so dont make a mistake and open the belly of a muscle for an abcess. It is not generally proper to wait for an abcess to get ripe.

before you open it.

When the middle of an abscess is soft, feel a knife in it, and cut out the pus. When this is done the patient gets rest. When you open an abscess, open it free: - by - never - make a small incision. After this, small blood vessels begin to form and form until they meet or nearly so - the pus is in the abscess cavity, and this is called granulation.

University of Ind.
Dec. 26th 1885–6.

Pneumonia – Pneumonitis – Inflammation of the Lung.

Causation – It is an inflammation of the substance of the lungs, like bronchitis, is generally due to the influence of cold and wet. It is also caused by the spread of inflammation from other parts; as from the bronchial tubes, in pertussis, bronchitis, measles, influenza diphtheria &c.; from the pleura in case of pleurisy; or, if the pleural cavity be obliterated by adhesions, from the chest walls or the surrounding viscera. It may be developed by the direct action of mechanical and of the irritation of the inhalation of irritant gases, particles of dust or metal; or it may be caused by emboli in the branches of the pulmonary artery or by tubercles or clots in the veins of the

Robt. T. Glassell.

lungs. It is more prevalent at certain seasons, especially those seasons when the temperature is liable to decided variations. In the British Islands winter is the season of greatest prevalence; on the Continent, spring: in this Country winter and spring, the former especially — hence the name winter fever. Persons who have a phthisical tendency are more liable to it, and there are other diathetic states concerned in the production of pneumonia; rheumatism, gout, diabetes, the eruptive fevers, especially chronic alcoholism. But acute idiopathic pneumonia occurs quite often amongst those who seem to be in the best of health. It is met with in both sexes and at all ages: but is more common in men than women,

because in their avocations they are more exposed.

Morbid anatomy.— It is generally divided into two forms; namely lobar and lobular pneumonia, or as they are termed by German writers, croupus and catarrhal; the type of the former variety being furnished by the idiopathic affection, that of the latter by the condition which is secondary to the diseases of the air passages. The two varieties however, pass into one another.

Lobar pneumonia begins with hyperaemia of the small vessels in the walls of the air-cells and bronchial passages; with proliferation of the epithelial cells in these parts; and exudation of lymph, and corpuscular elements of the blood. Communicating with these vessels are air-vesicles and pas-

sages which become gradually diminished with expired matter, and the air they contain is expelled and this portion of the lung becomes solid. The dilated vessels are more or less plugged up by their corpuscular contents, and the alveoli filled with cells. These cells are modified epithelial cells, some granule-cells, and others having the characters of pus-corpuscles — all are blended together by a glutinous material, or fibrillated network. During the retraction the contents of the air-vesicles diminish, and become more and more the microscopic characters of pus. The fatty degeneration may become general throughout the accumulated cells, which may be either expectorated or absorbed. Fibrous tissue sometimes formed

in the lungs by the conversion of the inflammatory exudation into pus, and sometimes by the occurrence of gangrene. Inflammation of the lung like inflammation in other parts sometimes results in exudation into the surrounding tissues and suppuration, like other inflammations, tends to spread. Pneumonia is divided at least into two stages; first is the stage of congestion or engorgement, the second that of red hepatization, and the third that of gray hepatization. In the first stage the lung contains more blood, it is congested, much more moisture and is easier lacerated than a normal lung, and is also heavier. This is the period of congestion and the beginning of hepatization, and at this

time it is difficult to distinguish the condition of the lung from that of hypostatic congestion. In the second stage the lung is consolidated; it has lost its air and its cavities are filled with cells; it is distended and its lobules can be distinctly seen; and presents a marbled appearance. Blood is sometimes extravasated into its tissues. The lung-tissue is easily torn and readily sinks in water. The third stage differs from the second, mainly by the lung-tissue being of a pretty uniform grayish color, yellow and purulent lungs, and in its increased friability, and in the exudation of a thick, purulent fluid from its surface. In some cases the fluid is scanty, and in others very abundant.

The oedema generally extends beyond the part of the lung affected. Inflammatory exudation often occurs on the surface of the inflamed part of lung, and also on the parietal pleura. Since pneumonia tends to spread, we occasionally find its stages at different parts at the same time in the same case. Inflammation may be limited to a small patch, or it may involve a whole lung, or even both lungs may be affected. The right lung & lobe is said to be more often affected than the left, and the lower lobe than the upper.

Lobular pneumonia is one affection of young children especially, but it is met with not infrequently in adults

persons. There are pneumonic patches in the lungs, varying from the size of a pea to that of a filbert, and involving one or more lobules, and separated by a network of capillaries, and perhaps healthy lung-tissue. These patches may be single, if such be the case it may be difficult to recognize their character, sometimes they present the ordinary features of red or gray hepatization. Much of the lung-tissue may become involved by these patches extending and coalescing; and this is the way lobular and lobar pneumonia pass into one another. True lobular pneumonia is always secondary to the blocking up of air-passages, especially the

capillaries; it may be excited by the gradual extension of inflammation from the tubes to the air-vesicles, or inflammatory products may enter the air-vesicles during inspiration which act as irritants and, consequently, are also exciting causes. Epithelial, granular or embryonic cells are found in greater or less proportion, according to the stage of the disease. The disseminated pneumonia is closely allied to lobular pneumonia, it is due to obstruction of the small branches of the pulmonary artery, either by embolism or thrombosis, or in the course of hyaemia. In these cases the affected patches are also usually of small size. Lobular pneumonia is usually

but marked towards the base of the lung. There is a tendency in the development in all forms of pneumonia, of bronchitis to a greater or less degree. In the beginning of pneumonia, a transparent viscid fluid, stained with blood is effused from the air-cells into the tubes; sometimes this fluid coagulates in the bronchial tubes, and thus they become filled to a greater or less extent with casts. Pneumonia often proves fatal; and sometimes passes into a chronic state or condition. Pneumonic abscesses are generally small and irregular in form. Gangrene rarely occurs in idiopathic pneumonia; but is principally met with in cases in which the pneumonia

is secondary or a complication of another affection! When the lungs become gangrenous their tissues break down into a fetid greenish yellow pulp, and the discoloration of the tissue surrounding disease is more or less greenish; and this solid tissue is sometimes calcareous. Gangrene may involve a large portion of the lung or several patches, or even one small patch. The margin of the gangrenous cavity, if a post mortem examination be held, will be bounded in some cases ill-defined, and in others well-defined. Besides pleurisy and bronchitis, we often meet with an herpetic eruption on or near the lips; more or less tenacious, mu-

bival congestion, and inflammation of the bronchial glands. During pneumonia other organs besides the lungs are sometimes involved by the inflammation; as the bowels, kidneys, pericardium and brain. Often times generally the left side of the heart is contracted and nearly empty and there is a clot of fibrin in the right side of the heart which projects into the pulmonary artery.

Symptoms and progress. — Idiopathic pneumonia is ushered in with a day or two of feverishness. The invasion of the disease is generally marked by a sudden and severe rigor, or succession of rigors, and in children by one or more attacks of convulsions; these

is also considerable elevation of temperature. The specific signs of the pulmonary affection usually show themselves immediately or in about twenty-four hours; very rarely are they delayed for a longer period. These signs are rapid breathing; dorsal decubitus; cough which is soon attended with viscid sputum stained with blood; sometimes pain when a long breath is taken; and according to the stage of the affection, fine crepitation, or dullness with tubular breathing, and increased bronchophony and vocal fremitus. The patient's fever continues; his skin is hot and dry or perspiring; his tongue furred;

his pulse accelerated; jaundice and diarrhoea are apt to occur; his urine is scanty and albuminous, and delirium occurs especially at night. In mild cases after two or three days of illness, the temperature falls, and the other symptoms subside gradually until convalescence is established. In favorable cases convalescence may be delayed for a week or fortnight, and then the patient may recover suddenly or gradually. Death may occur in fatal cases at any period of the disease, and is due generally to asthenia or asphyxia, or both of these conditions. The respirations are usually shallow

and hurried, and run up from the normal to 50 or 60 and even more in the minute, and when rapid the alae nasi expand, and there is usually a sucking sound in the mouth, and more or less dyspnoea. Cough, which is sometimes very troublesome and even paroxysmal, is almost always present. It is a dry cough at first, but is soon attended with expectoration of transparent and viscid mucus stained with blood. This sputum is usually described as having a rusty color, it often has, but it varies in color, and is sometimes a bright vermilion, when it may be taken for pure blood. After a few days the

expectoration becomes thin and greenish, and in fact assumes a muco-purulent character; and then gradually diminishes in quantity. Sometimes it acquires a deep purplish or reddish-brown tint and a watery consistence. This form of sputum is also likened to prune-juice, and is a sign of increased congestion and escape of blood. It is also a sign of the burning of the third stage, and a fatal issue. The presence of pulmonary gangrene is indicated when the expectoration is purulent, or is attended with fetor. The quantity and quality of the expectoration vary in different cases. In some there is more; in some the

patient raises expectorates more than one or two rusty-colored sputa; in all the cases the sputum never presents the characteristic tint. The expectoration contains sodium chloride, mucus and albumen. Sometimes the patient complains of no pain; sometimes of a sense of heat; and there is a stitch sometimes when he coughs or draws a deep breath. This pain is a sign of the coexistence of pleurisy. The most characteristic accompaniment of the pneumonia during the first stage is fine crepitation, which can be heard during inspiration, and sometimes during expiration, and frequently at the end of a deep inspiration. On percussion there may be no change,

or there may be high-pitched resonance
or cracked pot sound. The second stage
is marked by dullness over the consol-
idated portion of lung, with increase
of vocal fremitus; instead of fine
crepitation, we get tubular breathing,
and the corresponding whispering bron-
chophony. A metallic crepitation
is also sometimes present. There is
almost an absence sometimes
of respiratory sounds and bron-
chophony over the affected region, due
probably to obstruction of the bronchial
tubes leading to a portion of consolidat-
ed lung. During the coexistence of
pleurisy with pneumonia we get fric-
tion sounds, and probably there be-

nomena indicative of pleurisy. When resolution takes place, or the lung-tissue begins to break down a coarse crepitation takes the place of tubular breathing, to which the name, crepitation redux has been given. When the lung is consolidated, the movements of the thoracic walls in relation with it become impaired, and the resistance on percussion increased. Pneumonia may be confined to the inner surface, and thus escape detection by auscultation or percussion. Some dullness on percussion usually persists long after the local signs of pneumonia have disappeared. The cardiac pulsations

always increase during the febrile stage, but rarely increase proportionately to the respirations. Their ratio instead of being about 4 to 1, sinks to 2 or 1½ to 1. The pulse in adults may range from 80 to 120; in children may reach 200 or more. When the pulse is very rapid, it is an unfavorable sign, it is generally associated with feebleness. The pulse is frequently of fair size, somewhat full and strong, but sometimes full, soft and rebounding; later on it is always more or less feeble and thready. There is always an excess of fibrinogen in the blood. The tongue is coated, and in some cases becomes dry and brown, and

sordes accumulate upon the teeth. There is always loss of appetite, and thirst is pretty constant. The bowels may, sometimes, are not particularly affected; sometimes constipation, and at other times there is more or less diarrhoea, and this may be dysenteric in character. Jaundice is said to occur more frequently when the right lung alone is affected, but there is no more connection between right pneumonia and jaundice than between left pneumonia and it. The urine is scanty, dark-colored, and of high specific gravity; contains less sodium chloride than usual, and an excess of uric acid and urea.

with a tendency to deposition of urates. It contains sometimes albumen with hyaline, granular, or epithelial casts. It gets more abundant, pale, and of lower specific gravity, during convalescence; and the urea diminishes, while salt increases. The face is flushed in the early period of pneumonia, and may be somewhat lived; the skin is hot and dry; but there are often profuse sweats during the disease, and they generally attend its decline. An herpetic eruption about the lips and alae nasi is almost pathognomonic. In the beginning of this affection the patient complains first of headache and febrile pains. De-

delirium passes generally into coma in fatal cases. Subsultus muscular tremors, and loss of control over the bowels and urine sometimes occur in some cases. The temperature varies from 100° to 106° or more; and at times its maximum in a few hours. There are morning remissions and evening exacerbations in the temperature, until convalescence begins. Idiopathic pneumonia might be confounded with typhus and enteric fever, but generally its symptoms are so characteristic that it is almost impossible to mistake their significance. Sometimes these affections are complicated with

secondary pneumonia. It is different, however, in respect of the various forms of intercurrent or secondary pneumonia, and with the lobular variety of the disease. These creep generally insidiously in the course of other grave affections, which have already probably produced serious pulmonary symptoms; such as dyspnoea, cough, expectoration of serous, mucous or bloody sputa, lividity of surface, carbonic acid poisoning; but their onset is not usually attended by rigors, or high fever which characterizes the idiopathic variety; and they are not often accompanied by labial herpes, or jaundice, and often there is an entire absence of delirium,

resolving towards the close of the disease. These forms of pneumonia can only be positively determined by careful physical examination of the condition of the Thoracic organs. But lobular pneumonia may be present to considerable extent without dullness, tubular breathing or other specific signs of the disease. The phenomena of auscultation and percussion may differ little if any from those of capillary bronchitis. The crepitating sounds of lung-tissue in the latter stages of pneumonia does not reveal itself by any special sign, unless the cavities be of such size or position, to cause characteristic auscultatory phe-

nomena. These abscesses sometimes open into the pleura, or perforate the thoracic walls, and sometimes form sinuses running down behind the peritoneum, and they finally open into the colon or some of the hollow viscera of the pelvis. When gangrene is present there is a disgusting fetor of the breath. When gangrene appears there is also depression of vital powers or collapse. Pneumonia is always a disease of considerable gravity. The idiopathic form is seldom fatal, unless a large portion of the lung be involved, or both lungs be attacked; and in cases in old persons, or where patients have injured

their constitutions by bad habits, over-work or disease. Lobular pneumonia is very fatal.

Treatment.— The treatment must be governed according to the conditions of each individual case. It is well not to employ measures that interfere with the normal course of the disease. In nervous irritability, pain, rapid breathing, etc., administer morphia; give five or six minims of Magendie's solution with a third of a grain of the sulphate of atropia added to it. The morphia may be administered by the mouth in doses of a sixth or fourth of a grain. When exudation has taken place pneumonia can not be aborted, but

if the treatment is begun at the outset of the disease, it can be aborted by the administration of large doses of quinine combined with morphine. Tincture of Aconite may be given in the earlier stage provided the pulse is rapid: but it is a sedative consequently its effects need to be watched. Sedatives after consolidation occurs, should not be used; because the heart wants all its strength to drive the blood through the lungs. Opium too should be given very cautiously when the patient is suffering from dyspnoea and insufficient aeration of blood. In the second stage the main indications are to sustain

the weak pulse and to treat the high temperature. For lowering fever quinine, or the hydrobromate solution may be used. It keeps the temperature in moderate limits until the crisis occurs, when naturally it begins to abate. If the pulse is feeble and intermittent alcohol may be given the amount must be regulated by its effects: if it seem to be doing good continue its use, if not stop it. Carbinate of Ammonia may be given in five or ten grain doses with the alcohol; it favors expectoration. Do not use opium if the alae nasi become blue: you may give chloral but watch its effects for it is a sedative.

Turpentine also is given sometimes as a stimulant expectorant, in doses of ten or fifteen drops. In the third stage, when resolution takes place slowly, a blister may be put in the axillary space. Let it be left on long enough to produce a diffused redness; after its removal put on a flax-seed poultice. Iron, quinine and cod-liver oil are the best agents to be employed during convalescence. Some physicians think it well to keep the affected side invested in a large poultice or a layer of cotton-wool; a thus prefer the application of ice-bags or cold compresses.

Robt. T. Glassell, Va.

Disinfectants & Disinfection

by

T. Heyward Hays

Class 1885. & 1886

Owing to the prevalence of Cholera in Southern Europe during the past year or two. a greater attention has been given to the subject of Disinfectants. in order if possible to abate in some measure the terrible ravages made by this and similar contagious diseases. whose orgin is supposed to be due to living organisms. The literature on this subject is very extensive and the results arrived at during the last year have indeed been flattering and bids fair, at a near period. to solve the question:

What is the most efficacious remedy for the destruction of these organisms? I will not attempt to answer this above question in this article, but only wish to give the result of my long experience in the handling and using of those articles commonly used as disinfectants.

By a disinfectant is meant, first, a substance either in the liquid, solid or gaseous state, which destroys or renders inert that which probably would produce disease, whether of an infectious or contagious type, and secondly, a substance which arrests those putrefactive changes in decomposable materials, which foster or

produce those germs, gases, or vapors, that induce disease in the human system. An antiseptic on the other hand is a substance which prevents decay in material that is liable to decay and thus it may seem that disinfectants act upon materials, that produces those death giving germs etc, while antiseptics act upon those substances, which enter into that state, but have not as yet done so. The use of salt, sugar, vinegar, and the employment of heat are well known expedients of household antiseptics. Mercuric chloride and arsenic are extensively used in embalming and in the preservation of medical specimens. Thus it will

be observed that any substance classed under the head of disinfectants may also be used as antiseptics, and if large quantities of antiseptics possibly will also acts as disinfectans

Since the masses of material which we are called upon to disinfect, are usually large, it becomes necessary to seek out the smallest quantity of material necessary to decompose the decaying matter, or destroy the germs, gases, etc already formed, and it is necessary to find also the cheapest article possible for such purposes, for usually the localities that call for a vigorous disinfection are the homes and

surroundings of the very [illegible] our population. The disinfectants now in use are more or less poisonous, and some of them are even dangerous to handle. The safest plan is the destruction or removal of the excreta or animal refuse, but this is not always practicable in a household or community. The question is how can the putrid fermentation be arrested and destroyed? To answer this the process of putrefaction should be understood, and the causes and most favorable conditions for this process studied. A certain amount of moisture is necessary, and a temperature not to exceed 100 degrees

Fah. or lower than 55. will give us the necessary conditions to set up putrefactive changes in animal matter. If the temperature is carried beyond 100 degrees, and the process of driving out the moisture by drying the putrescible matter, decomposition will be arrested, and the process for a time suspended, a like result will be obtained if the temperature is lowered below 55 degrees. Fah. but it has been proven without a doubt, that in such cases, where the dried and frozen material are again placed in the same favorable conditions, a like result will be ob-

tanned, dessication then can only be regarded as an antiseptic process which suspends the vital force of the organisms taking part in the fermentation of the animal matter, the same remarks are applicable to a low temperature, which suspends animation for a time, but are brought again into activity by the application of warmth. Heat on the other hand when carried to a high point, has been shown to prove fatal to such organisms, a short exposure to a high heat, and a long exposure to a low temperature has been found to destroy infections or putrefactive organisms Another factor in the putrefactive

process is the presence of a small amount of Oxygen, although it has been advanced by some that Oxygen is not an essetial element to the process but it is said to retard the change. the investigation however of this theory requires more time and attention, together with considerable outlay which is beyond my power to give or bestow upon it. The subject cannot be settled by the use of these materials that will ~~supply the necessary amount of oxygen~~ as these agents complicate matters by the copulation of the albumen &c. if we supply and excess of Oxygen this will and does disinfect

In the process is in itself stages in the oxidation of the elements of the constituents of the decomposed matter. If then we supply them with a larger amount of oxygen, especially in a condensed and active form, aside from any direct action ~~action~~ on the organisms present, the organic matter is rapidly carried through these stages to a greater or less extent according to the amount supplied, and is converted into compounds less favorable for the development of such organisms. A number of substances used as disinfectants act in this way as ozone, Sulphurous peroxide nitrous fumes, Permanganate Potash, per

Salts iron, Chlorine. Bromine, or substances which can be made to supply Chlorine, as Chloride Lime, which by combining with the hydrogen of the water or of the organic materials sets oxygen free, various substances disinfect in a way which is not fully understood, but which seem to have something in common with their power of coagulating albumen, That is all these substances have the power of coagulating albumen, though their power of disinfection, are not proportioned to their power to coagulate, and in the case of some it has been observed that a disinfective power exists even when so.

diluted that they fail to coagulate albumen. at any rate the nitrogenous matter in organic substances is their chief sources of nutriment for putrefactive organisms, and this explains why the decomposition of animal matter (which contains a large proportion of nitrogenous matter represented by albumen) is more dangerous than vegetable matter and some action not clearly understood is made upon the nitrogenous matter by certain agents The agents which produce this change are the so called coal tar products: as carbolic & cresylic acids. We will now consider brief-

by the several agents used as disinfectants

Sulphurous Acid

This acid stands at the head of the list and the power of its ability for destroying diseases which are dependant upon the germ theory is almost universally known. It is used by sanitary authorities with the greatest confidence. Especially in destroying the infection of small pox, Scarlatina & yellow fever. It has been known to possess these properties for a long time, even as early as 1771. it was used by the Russian authorities during the pest at Moscow. It has been said that

a number of criminals condemned to death were made to wear the garments of soldiers who deceased with small pox. the clothes having previously subjected to the action of sulphur dioxide for several hours. The result of this experiment was successful as none of the condemned men contracted the disease. The acid is even yet used extensively and with the greatest confidence in disinfecting ships. hospitals & public institutions. but recent researches have shown that it is not the powerful germicide. that some claim for it. and that its use on a large scale may eventually be abandoned. and some

other agents from which more positive experimental results may be obtained adopted. Sulphur Dioxide may readily be obtained by burning sulphur, it is two and a half times heavier than air and soluble in water, but it deteriorates if kept in the aqueous state and for experimental purposes should be freshly prepared. it is very extensively used for its bleaching properties. owing to its exceding ly pungent odor. it cannot be used where human beings are exposed to its effects. so small a quantity as one part in ten thousand of air will produce discomfort. Sulphur dioxide should not be used to.

gether with chlorine as one neutralizes the other. In disinfecting a room from one to two ounces of sulphur roll or flowers should be used for every hundred cubic feet of space. this is placed over sand or water to prevent accidents, and then ignited. the apartment should be kept as air tight as possible and left from five to six hours exposed to the gas, As already intimated there has arisen a doubt in the minds of scientific men as to the true position of sulphur dioxide as a disinfectant. it having been demonstrated by carefully conducted experiments. that the gas has not.

the power of destroying the potency of some organisms. while its efficacy in destroying bacteria. and the micrococcus from a vaccine vesicle. with a five per cent solution. yet it utterly failed in spore containing material.

In an able article written recently by Dr Geo M Sternberg. Surgeon U.S.A. he concludes his paper in these words "My experiments show conclusively that it does destroy the specific infecting power of vaccine virus dried upon ivory points, when present in the air of a disinfecting chamber, in the proportion of one volume per cent, and that in aqueous solution it destroys the vitality of various mi

crococci in comparatively small amounts. It is even practicable to destroy these organisms dried upon pledgets of cotton on long exposure in gas tight receptacles. But the conditions of success are such that it appears almost impracticable to conform with them on a large scale, and it is evident that much of the so called "disinfection" with this agent is a farce"

Heat

The effects of heat have already been noticed. Dry heat is considered the most efficient for disinfecting purposes. the articles contaminated, should be exposed

from five to six hours to a temperature above 212° Fah. In Great Britain dry heat is much used by the sanitary authorities. this is applied to clothing ect. in a large oven constructed for the purpose. and the heat carried from 212. to 300 degrees Fah. Such an elevation of temperature would seem to effect the material, but it is shown that woolen goods exposed to this temperature do not deteriorate, but in cotton and silk goods the fibres are more or less damaged.

Chlorine

This gas like Sulphur dioxide has

also been long know and accepted as a disinfectant. and is extensively used in the form of Choride Lime. Chlorine may be readily obtained by the spontaneous liberation from bleaching powder, or soloution of sodium hypochlorite, or by the action of sulphuric acid on binoxide of manganese and common salt, for disinfectant purposes it should be generated in large quantities. the most convenient method in generating it is to use for every cubic metre of space to be disinfected fifteen grams of dry Chl. Lime. He should mix it with q.s. water to make a thin paste. this to be divided in several portions

and placed in different parts of the room and to each portions add the same quantity of common Chlorohydric acid ~~as it contains time~~. the same precautions in reference to windows and doors should be observed as laid down in the use of Sulphur dioxide The most thorough experiments with Chlorine were made by Fisher and Proskauer. the material tested consisted of the spores of Bacillus anthracis. micrococcus tetragenius micrococcus prodiginous. bacillus of septacemia of mice. bacillus of septacemia of rabbits. aspergillus nigrescens. and aspergillus ruber. and bacteria of fowl cholera. and

microörganisms, their conclusions seem to justify the statements that Chlorine is an efficient disinfectant when in the proportion of one part in one hundred. but the air and objects to be disinfected should be in a moist state and should be exposed from two to three hours. Chlorine being a powerful bleaching agent all fabrics will undergo more or less change when exposed to its influence

Iodine & Bromine

These two substances though differing in physical appearance. seem to have about the same value as disinfectants. their effect on the

various non-pathogenic microorganisms are of equal value. Iodine may be used by gently heating in a saucer over a water bath. Bromine may be placed in an open dish and allowed to evaporate. The extreme unpleasantness in handling Bromine has in a measure been overcome by an invention in Germany which consists of a block of porous material, preferably made of infusorial earth saturated with Bromine used in this form it may be handled with perfect ease

Carbolic Acid

Carbolic and Cresylic acids may be said to have been used as disinfectants since 1834. when discovered by Runge. they are distilled from coal tar. and the articles made by Calvert & Co. have a universal reputation for purity etc. Carbolic acid is the basis of Professor Lister's antiseptic surgery, and was brought prominently to the attention of the scientific world through this channel. and thus led to an investigation as to its disinfectant properties. Prior to this it was used in Europe as a disinfectant and was also held in high es-

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term in this country for similar purposes, but of late years its use as a disinfectant has been called in question and has led to the most careful & practical investigations by Dougall, Baxter, Sternberg & others. It was demonstrated by them that Carbolic Acid could not be relied on as a disinfectant except in special instances. and especially in the bacteria of putrefaction it was inefficient. The large per cent of Carbolic acid required in the liquid form for disinfectant & germicidal purposes prepares us for its failure in the gaseous form so that the popular idea shared by

a great many physicians that an
odor of carbolic acid in the sick
room, or in a foul privy, is an evidence
that the place is disinfected is en-
tirely unfounded, and in fact the use
of this agent as a volatile disinfectant
is entirely fallacious, and impracticable
because of the expense of the pure
acid and the amount required for
the purpose, it being estimated that
in order to disinfectant a room, twelve
feet square and twelve feet high,
it would be necessary to scatter 17 lbs
pure acid or 85 lbs common acid.
& even this would not entirely destroy
the bacteria, but as an antiseptic
this article has few superiors

Mercuric Chloride

During the last four or five years this agent has been brought prominently before the public as a disinfectant. It is claimed however by Prof Koenig of Goettingen. and in a paper recently published in the "Centralblatt fuer Chirurgie" that he has used it in the form of vapor with uniformly satisfactory results during the last twenty years both in hospitals and in private sick rooms. It has also been known as a parasiticide and as an antiseptic agent for the preservation of animal tissue for a long time. but it is only recently been demonstrated that Bi Chloride Mercury occupies

a leading place among germicidal agents. The iodide has also been put forward as an antiseptic and a germicide, but owing to the cheapness and solubility of the chlorides it will doubtless be awarded the first place. Experiments were performed on the anthrax spores B. subtilis. the sputum of tuberculosis, &c and Dr Sternberg who performed the above mentioned experiments was justified in forming the following conclusions: "Mercuric chloride in aqueous solution in the proportion of 1: in 15.000, is a reliable agent in the destruction of micrococci and bacilli in active growth not containing spores.

~~stasses~~. and in the proportion of 1. in 1000 it destroys the spores of bacilli; provided that the microorganisms be exposed fairly to its action for a sufficient length of time. A standard solution 1 in 1000 may be safely recommended. For the disinfection of bedding and clothing which can be washed, for washing the floors and walls of infected apartments: for disinfecting the hands of surgeons and gynecologists. and as a disinfectant wash for superficial wounds or mucous surfaces For continuous application to wounds, a solution of 1 in 10.000 or less, should be effective"

I. Few practical remarks on carrying out the application for ordinary disinfecting purposes will conclude this paper. Clothing bedding &c which will not be injured thereby should be exposed to a temperature not exceeding 300 Fah. for two hours. Clothing may also be disinfected by immersing uncolored material in a solution of Chl. Lime in the proportion of one part in thirty. Clothing that can be washed should be boiled for a half hour. no delay should occur however for as soon as the soiled clothing & bedding is removed it should be transferred to the laundry

A Solution of one part of Labarques Solution in five of water is excellent for washing the bodies of sick persons or attendants when soiled with infectious discharges, the excreta of small pox. scarlet fever & cholera should at once be disinfected with a solution of chloride lime in the proportion of one in four of water. or if the odor is disagreeable to patient use a solution of Bichloride Mercury and Permanganate Potash in the proportion of two drachms of each to a hint of water To disinfect a room containing a patient suffering with an infectious disease. the room should be vacated

tilated and the strictest cleanliness observed, and noxious odors may be neutralized by the use of carbolic acid. The walls, floor, window ledges & furniture should be washed with a solution of 1 ounce Sublimate of the strength of one part in one thousand. The walls should be whitewashed, after the room is vacated by the patient, it should again be subjected to the same treatment. and sulphur may be burned. to destroy those organisms upon which it is supposed to act. for privies, cesspools etc, use one pound of lehl. Mixture to every hundred lbs fecal matter estimated in the vault or one lb. of lehl Lime to every thirty pounds, walls of vaults

should be washed down with the same solution, during yellow fever cholera or other epidemics. Lime should be sprinkled in vaults every day. All water for drinking & cooking purposes during an Epidemic stage should be boiled and filtered before use.

Thesis.

John A. McLaughlin.

— Arsenic. —

Arsenic is sometimes found in nature, but more frequently combined with other substances chiefly with iron, nickel and sulphur. It is also contained, in very small quantities, in many mineral springs. To separate it from the metalic ores in which it occurs, the ore is roasted in a reverberatory furnace: the arsenic combines with the atmospheric oxygen forming arsenic trioxide, or commonly called white arsenic which is caused in the stack

of vapor from the furnace into long chambers of sheet iron in which the arsenic trioxide is deposited. Metallic arsenic may be prepared from arsenic oxide by mixing it with charcoal and sodium carbonate, and heating in a closed crucible, the upper part of which is kept cool; arsenic condenses in the cool part of this apparatus as a solid with a brilliant luster. The vapor of this arsenic possesses a remarkable garlic like smell.

Arsenic in the metallic state

is inert unless it is oxidized and forms arsenic trioxide, and act with unexpected violence. When brought in water it forms an acid. It is therefore an anhydride. It is best in solution for internal administration. The dose of arsenious acid is 1/30 to 1/10 of a grain."

Iodide of arsenic is an orange red crystaline solid. Dose is 1/10 grain. Arsenic in solution with the alkalies are all soluble in water.

The best preparations of arsenic are the following:

Liquor Arsenii et Hydrargyri
Iodidi; known as Donovan's
solution, dose mij to v
Liquor Potassii Arsenitis; known
as Fowler's solution, dose mi-X,
Liquor Sodii Arseniatis; known as
Pearson's solution, dose mi-XX.
The strength of this preparation
is one-hundredth of the arsenic
of all the solutions mentioned
above, Fowler's is said to be
the best. Arsenious acid ad-
ministered may act with
unexpected violence.
When a course of arsenic is
begun, large doses should
be prescribed, and the gradu-

administered should be regularly reduced. In this way arsenical poisoned is avoided. When continual increasing dose is kept up for a length of time the arsenic accumulates and toxic symptoms are generally induced. However when the idiosyncrasy of the subject is unknown it is better to make experiment with a few small doses before you begin with the larger doses.

The chemical incompatibles of arsenic are the salts of iron, magnesia, lime and all the astringents.

The chemical antidote to arsenic in solution is the sesquioxide of iron freshly prepared. It is harmless and should be given in teaspoon doses ever ten or fifteen minutes. However the first thing to be done in arsenical poisons is to evacuate the contents of the stomach.
In the absence of the hydrated sesquioxid of iron, magnesia chalk and lime water may be given freely.
After the acute symptoms has pass off you may use diluent drinks, milk slightly

7

alkaline water, to promote elimination of the poison, and opium to subdue inflammation.

All those agents which promote constructive metamorphosis are synergist to arsenic.

Physiological action.

The compounds of arsenic are powerful escharotic, and will produce sores on those who work in the arsenic preparations. Aplyed external it absorbs and produce symtom as though it were taken by the stomach, redness, soreness & pain, is a curious fact.

The effects of the administration of arsenic depends on the amount administered and the way in which it acts.

In medicinal doses it promotes appetite, digestion & nutrition, and improves the body nutrition. It increases the secretion of the gastro intestinal secretion, and hastens the intestinal peristaltic movements. Arsenic diffuses into the blood with facility and probably enters into the red blood globules.

It certainly lessens the excretion of carbonic acid and

probably also of urea. or checks the retrograte metamorphosis It stimulates the cerebral functions and in some subjects mental exhilaration.
In larger doses, short of acute poison, administered for a lengthened time there is a metallic taste: nausea & vomity of glairy mucus epigastric pain and soreness and after a time diarrhoea of rice stools. The heart is feeble and palpitation, depressed breathing. The skin shows its self by itching of the eyelids urticaria and psoriasis

As regards the nervous system: disordered mobility - trembling stiffness and contraction of the joints, disorders of sensibility. However it is true not withstanding the above effects that a certain degree of tolerance may be established as witness by the arsenic eaters of Southern Austria, who become habituated to enormous doses taken twice in the meadows with impunity. They find it serviceable by improving the bodily condition become stronger gain in breathing power

As a proof of this bodily improvement brought about by the use of arsenic, is shown by that they can persist in long runs ascending high mountains, and great bodily exertion without much fatigue compared to those not using arsenic.

When arsenic is taken in sufficient quantity to produce symptoms of acute poison the phenomena produced are of two kinds: one gastro-intestinal and the other cerebral effects. The gastro-intestinal form of arsenical poisons are known

ing at the epigastric, violent
vomiting, great dryness
of the mouth and fauces,
intense thirst, bloody stools
retracted abdomen: suppres-
sion of urine or bloody urine
palpitation of the heart,
oppressed breathing, livid
countenance and cold breath.
The other or cerebral form
without the characteristic
abdominal symptoms. The
patient is suddenly put in
a condition of profound in-
sensibility, similar to that
of opium narcosis, profound
unconsciousness established relieved

Recovery from acute arsenical poison is rarely complete. Gastro-enteric irritability persist for a long time and life may be lost by continued suspension. In the functional changes found after death are due to an irritant: slight redness erosion. More or less redness of the tracheal and bronchial mucous membrane and perhaps congestion of the lungs. Death from the cerebral effect there is no anatomical change except redness of the intestinal tract may be observed. Fatty degeneration

of the liver, kidney and spleen is produced from arsenical poison, perhaps by lessening the amount of oxygen to the tissue. Paralysis of a certain bember or more frequent paraplegia. The dust from arsenical wall paper, which contains a large amount of arsenic, have produced a cachelic state accompanied by headache vertigo. Garments dyed by arsenic have excited ulcerations of hands and nails and anaesthesia and paresis of the extremities. In fact sleeping apartment lined with arsenical paper may produce poison

Therapy:- Arsenic is very beneficial in the so-called irritative dyspepsia. Best adapted by the following symptoms: vomiting, poor appetite, distress after meals and pain; two drops of Fowlers Solution with a few drops of Laudanum. It is very beneficial in some forms of vomiting of pregnant. In vomiting of chronic gastric catarrh and chronic ulcer of the stomach, cancer of the stomach, by relieving the morbid state of the mucous membrane on which the vomiting depends

In all states of stomach disorders only small doses of arsenic is required. Large doses by creating an irritant of the gastric mucous membrane will only defeat the end in view. Jaundice due to catarrh of the bile duct, succeeded to catarrh of the duodenum

It is better to jaundice depending upon malarial origin Constipation due to deficient secretion dry faces is overcome by small doses of Fowlers Solution. In chlorosis and anaemia where iron does not agree, arsenic with bitters more efficient

Troubles of the broncho-pulmonary mucus membrane such as chronic catarrh chronic forms of phthisis is much benefited by long continued use of small doses of arsenic. In cases of hay asthma spasmodic asthma chronic bronchitis, emphysema, these may be treated with advantage by the use of fumigation.

Formula and mode: Arsenite of potassa fifteen grains. Distilled water one ounce. Take sufficient quantity of white paper and thoroughly moisten with this solution of arsenic, dry & cut up into fine pieces and divide into

twenty equals parts, and put one of these parts on a plate and set it on fire and the patient inhale the fume with a blanket over his head. This may be practiced 3 or 4 times a day.

Attacks of angina pectoris may be lessened or prevented by persistent use of large doses of Fowler's solution.

It is said to be good in cerebral congestion, melancholy of the age, neuralgia, epilepsy, form of vertigo. It is highly recommended in chorea. Large doses are required ten to fifteen drops three times a day. Local chorea best inject it.

Twitching of the eye lids and paralysis of the third nerve, known as ptosis. Three drops of fowlers solution before meals three time a day. In many forms of skin affection, more especially of the scaley and chronic form. It should be administered for an indefinite lenght of time. By continued use symptoms of poison manifest themselves should still persist its use by lessens the dose & give a purgative. Arsenic and quinine has an important position in the treatment of malaria toxaemia. Good in diminishing the

enlargement of the spleen caused by malaria. In these forms it is best used in combination of arsenic, quinine and iron. Amenorrhoea and menorrhagia due to anaemia arsenic with iron is the best form for these troubles. Functional impotence is sometimes greatly benefited by arsenic iron. Arsenious acid two parts, sulphate morphia one part and sufficient creosote to make a paste is good in toothache applyed to the carious part of the tooth in cotton saturated with this solution. It is also used to destroy cancerous growths.

Thesis — Dedicated to the
Honorable Faculty of the University
of Maryland by

R. J. Anderson

Baltimore Md.

1886

Intermittent Fever

Definition Malarial fevers are characterized by their periodicity and by their regular succession of the cold and hot and sweating stage various designations have been applied to these forms of fever such as Fever and ague, Chill bilious fever or Remittent

Causes

The great etiological factor is malaria the telluric and other conditions favorable to the development of malaria exist largely in the country along the Atlantic sea board as far north as Boston in the Mississippi great Interior region drained by the Mississippi and its tributaries the valley of the Sacramento in the western the presence in the atmosphere and telluric principles which is developed in certain atmospheres although the existence of such a

principle is admitted the attempts to Insolate and define it have proven abortive unless the recent discovery Klebs and Tommasi-Crudeli supply the sup missing form the Bacillus Malariae which they have discovered floating in the atmospheres of the Pontine marshes. Produces Paroxysms of Intermittent fever in the Animal subjected to it action by Inoculation. If this discovery is confirmed and these rod like bodies are proved to be the cause of those Phenomena which we call Malarial fever, it will prove to be the first and most Important step towards permanent eradication disease Malaria is also called Marsh Miasm because of the abundance of this Poison about marshes but all marshes are free from marsh miasm. although well adopted to do it marshes that are pretty Brackish are

worse than those entirley fresh in country.
Malaria is more produced the sandy alluvium
of the Rivers Valleys. subject to annual overflow
and heat by the summer sun the alluvium
and some very sandy soils of Malarial zone
not subject to overflow also generate Malaria
when Malaria Infections occur or established in the
system all diseases occurring will have more
or less of the periodicals Character the formes
of malaria diseases will depend upon the
condition of the system and the Intensity of
the Poison it self.

Pathogical Anatomy.

Changes caused by Malaria Poisoning are essentiley
the same except degree in all the formes, in
which the diseas manifest itself in two organs
the Liver and Spleen. becomes very

much enlarged cheaply consumed in acute cases the Splenic Pulp increases in relation quanity and sometimes there are dents which have been observed, in some cases of Pernicous fever in some chronic cases the Spleen undergoes enormous enlargments it texture is tough and smoke in sections, and has a grayish slate color this change consist Hyperplasia of the trabeculae with Hypertrophy of the capsules but in some cases the increased size of the organ is due to amyloid degeneration when the organ is very large it is known as ague cake usually in Chronic Malaria Pressing the spleen is some what enlarged but not much increased to be called an ague cake the change consisting of diminution of the Splenic pulp and Hypertrophy of the trabeculae and Capsual the color of the Spleen is a grayish

Slate-Color due to pigment deposits which are found in great abundance in the walls of the bloodvessels where it is deposited by disintergration of the Red globules. an Important Change takes place in Liver during Intermittent the Liver becomes Hyperaemic and swollen and if Jaundice is present very much enlarged and stained with Pigment and the Portal capillaries distended with blood and the gall bladder filled with thick black Tarry Brown Bile in chronic cases the Liver has a grayish tint due to Pigment deposits along the vessels. It is firm in texture and the divided parts preserve sharpe outlines, the hepatic cells are pale and filled with fat granules. the Intestinal canal presents characteristic changes during an acute attack there extensive and considerably Hyperaemia of mucous membrane and more or less

thickening and elevation of the solitary glands in Chronic cases the Intestinal mucus membrane have a slate color due to Pigmentation of the capillaries the kidneys is also affected by characteristic changes Hyperemia during the acute attack. and subsequent altration as thickening membrane the tubules filled cast off epithelium the Intestinal connective tissue proliferating and is more or less amyloid changed in the Malpighian tufts and small arteries. the Heart is flabby its muscular fibers easily torn the cavities are distended and soft black coagula very loose the white corpuscles are much increased in number. the most Important change in the composition of the blood. is the formation of Pigment from Haemaglobulin the hamitans is set free

Symtomes

a certain Period elapses after exposure before there are any disturbance in the functions of the Period

Varies from a few hours two many weeks the average is usuley fourteen days in long. Proportion of cases the patient has a feeling of Lassitude and weriness suffers with backache and general muscular soreness he has an inclination to yawn on cold damp days his headaches Tongue coated Stomach & gaumous towards evening his skin becomes dry & warm his sleep is disturbed by dreams and in the morning there are profused sweating there is a yelowit hue to the skin langour loss of appetite and constipation the urine is loaded with bile Pigment Intermittent Fever ague & Fever there are three distinct events in every Proxysm of Intermittent fever the chill & the Fever and the sweating when the chill comes on there is a feeling of Rechidness weakness & Illness there is Head-ache. Backache Creeping chill is felt along the Back the whole surface becomes cold and the patient

gladleys returns to Bed dose not make any difrence how much cloathing is put on the bed the fingers becomes blue his Lip blue the nose Pinched the countinence Shrinkan one fit after another Shudeing comes on the teeth rattle togather the bed shakes meanwhile the pain in the back. Head & Limb continues, there is extreme thirst and often Nausea & Vomiting Respiration is quick voice is weak trembling pulse small rapid the urine is pale Temperature begins to raise with onset of the chill the Thermomiter indicates fever the chilliness remains for several hours, the chilliness dose not atain abruptlay the shakeing subsides slolay as the feiling of warmth appears, the face becomes flush Pulse becomes fuller blumes of the skin disapear and a throbbing is felt in the Head and pain in the back and Limbs disapears a pain is felt in the temples the Ideas are confused, the patient is

Tempted to get up there is noise in the ears
Vertigo and Nausea are experienced in attempting
to get up the Mouth is dry Thirst Constipation
high color Scanty Urine Duration of this Stage
varies from an hour to Ten or Twelve and succeeds
by the third sweating Stage, while the Fever is
succeeding a slight Moisture occurs on the fore-
head, presently it becomes to drops and finly
pours off sweating the sheets Shirts the sweat is
an acid in reaction Contains a large quantity
of organic Mater the Urine is also acid and
high Colord owing to the Pigment and contains
much Uric Acid the disease may begin abruptly
when the patient is in full health or during the
Puerperal State or in the Course of Chronic
Malarial Poisoning
Intermittent Fever Ague and Fever

There are three distinct events in every Paroxysm
of Intermittent Fever the chill the fever & the sweating
when the chill comes on there is a feeling of Restlessness
Cause Duration Termination

After certain Intervales what is diffrent in every
Type and there are again preceded a chill Fever
and sweating Intermittent Fever follows & diffrent
periodicity the rarity of Type is known as
Quotidian Intermittent they do occur on
alternate days or the third day including
there attacks there is still another Variety
it is called Quartian Intermittent this last
Variety is uncommon. Sometimes two distinct
Paroxysm may occur on the same day
the Tertian it is a variety in which
there are two distinct Paroxysms on one day
and one Paroxysm on the next and finally there

after day without fever duration varies with the disease or Malaria Poisoning has been thoroughly occurred the deposition to attack continues for a long time or Period for years exposure to cold Diet Fatigue Mental anxiety may excite an new attack It is rare for Intermittent Fever To cause death directly but Indirectlay through various alterations occurring in Malarial Poisoning the course of Intermittent is much diversified by the variation. a Profuse sweating copious Uniary discharge. and raise of Temperature there is an attack of Diarrhoea when Sciatica occurs it may be Intermittent or Remittent sometimes accompanied with Clonic Spasams not very frequantly this attack occurs in cardiac nervous trouble Producing a Phenomena of Angina Pectoris. Then Sense of great difficulty in breathing a slow hard pulse cold skin Blue lips & fingers ending with free eructations of [illegible]

a discharged quantity of pale urine

Pernicious Intermittent In those parts of United States where Malaria is most concentrated and Malarial fever most severe the ordinary Intermittent may assume a most favorable character it is properly known as Congestive, that an attack of Intermittent will assume a pernicious character Sometimes the condition of exaustion induced by severe attack Cholera Morbis and may render the Patient unfavorably There may be an increase of sweating it is not often that the first attack proves fatal but they are being more an more dangerous and often the first any succeeding may be fatal in algid forms the difference in the heart which is an destruction feature comes on rather in the fever or the sweating stage while Intense Internal heat is experienced by the patient the surface becomes cold, livid & Pulse small and very rapid action of the heart becomes feeble the sh...

covered with a cold sticky sweat but the mind undisturbed, if death occurs the condition of the coldness disappears but after a longer or shorter duration of the Algid the action of the heart grows a little stronger and gradually becomes warmer until it restors the surface

Sequelae of Intermittent Fever

When the attacks of Intermittent Fever have been disturbed Treatment Relapse is apt to occur in fact by the Treatment Phenomena of Fever may have been removed in close Inspection that there are still occurring in regular Sequence certain disturbance the Thermometer may show elevation of Temperature there may be distinct Sweat or profused Urinary discharged may occur after a determination of Type of Proxyma may occur the Relapse From the Seventh to Fourteenth and

Twenty first day [illegible] is more [illegible] the
Periods will occur on the Sixt day at the first
former attack Relaps will take place on the third
Sixt & Ninth and Twelth day and soon the occurrence
of Relaps is definitely upon the age it is most
greater under twenty and very slight after
Six weaks or six months the tendency of Relapse
is due to the condition which determined the first
Secura the result of long continued action
of Malaria, While the most disastrous the Blood
looses it Red globules while the white diminishes
in size and increases in number, the Ankels
becomes swolen the Liver & Spleen enlarged the
skin is yelow the appetite is poor the digestion
feeble Stools are a clay color and the Urine
may contain albumen and is colored with bile
pigment fluid accumulates in the peritoneal cavity

Symptomes indicative of disturbance in the Intracranial Circulation such as headache Vertigo Sofor

Prognosis

Ordinary Synchal Intermittent fever or regards is not a grave Effection whenever the Disease undergoes mediate danger it is to be considered as Pernicious and not belonging under the head of ordinary or Synchal Intermittent Fever an important fact Intermittent Fever at first devoided of Medicate danger may become Pernicious an ordinary or synchal Intermittent may become very serious if continued long, or recur frequently by Medicacy anemia general Dropsy or Malarias cachexia the effect of Disease however they are very rarely themselves fatal Death may result from from accusation of Intermittent for with other effections it is not a small matter to

Diagnosis

A case of Intermittent Fever complete at all points could hardly be confounded with any other Malaria or Malade it may be mistaken for Pyemia in which they are chills fever. Sweats with an Intervals it differs from Pyemia in its Organs and in Clinical Course Intermittent is due to supposed Miasm Pyemia to wound suppuration of Pains & Intermittent is regular in course Intermittent Vagina effection promptly Cured by Sinus Pyemia is a fatal disease overwhat Sinus has no other influence it ought to be remembered that Pernicious has occured at time when then regular Proxysm is due and that probly a strong malarial influence prevails the comatose variety is often produced by

Palpitation of the Heart and a various Hum over the great vessels occurring a watery state of Blood. and for the same reason Epistaxis take place menses becomes profused the changes that takes place in the Blood are due to various causes to the Interference by the Stomach & Intestinal trouble with primary assimilation to the morbid state of the Blood making organs especially to the destruction of the Spleen of the Red Blood globules and to the conversion of Hematin into Pigment which we have shown to take place in various causes. among all other Nephrolites amyloid degeneration of the Liver Kidney Spleen and Intestinal glands Sclerosis of the Liver anaemia Dropsy Tuberculous Neuralgia Epilepsy Hemiplegia & Mania

Contract - Intermittent Fever on account of
Liability to relapse, and to account of Diseases with
other Affections

Treatment

For the cure of Intermittent Fever Medicine
Possess Specific in any remedy are
Intended to this Affection this Treatment is
Salts of Zinc of which Sulphate is one
Universally used Sulph. Zinc will promptly Interrupt
the recurrence of Paroxysms of Intermittent Fever
in most majority it is always durable to cure the
disease as speedily as possible the Preparation of Cinchona
and other anti Powders and good Intermittent
remedies is Maximum Force

Puerperal Fever.

Ed. L. Downey,
Downsville,
Maryland.
1886

"Puerperal Fever."

Puerperal Fever is a name given to a disease peculiar to women in the puerperal state, and at times affecting those in the latter period of gestation. It is both contagious and infectious, and occurs occasionally in epidemics. According to modern views of the disease the name seems to be ill-chosen, as it implies some disease, whereas the fever is but a symptom of the disease. A better name, as that given by more modern authors, [illegible]

shorter than the primary attack. In circumscribed inflammation the pulse rarely exceeds 120 beats per minute. If it reaches 140 per minute, severe septic complications exist. In the first days of the fever, there may be a pulse of 50 or 70 per minute, with a temperature of 104° F. Other symptoms are: headache, sleeplessness, profuse sweating following attacks of fever, pain, want of appetite, sides of the uterus sensitive to pressure, occasional vomiting, tongue coated, constipation commonly, & rarely diarrhoea. Most cases terminate in five or ten days, the symptoms

gradually subsiding. If the fever
continues longer than a week
there will be a tendency to the fibroid
forming a tumor, which is less
severe than a fibroid pneumonia
tumor, and which rarely exceeds
in size, that of a hen's egg.
The older the tumor, the more
certain will it be. The operation
consists in first opening the
abdomen, then tying off the pedicle
with two pieces of silk, one
inch apart, and cutting between
them. The pedicle
[illegible]
[illegible]
[illegible]

and [illegible] especially in causing [illegible] to [illegible] pleurisy.

Sanderson says radical efforts over the abdomen, the pain in the abdomen being of a tearing or lancinating character.

Dyspnoea from pressure of pressure in the bronchi; suffocation of a peculiar character; the [illegible] [illegible] [illegible]

above the average.

Causes:

Causes are of two kinds, viz: autogenetic and heterogenetic.

By autogenetic infection is meant those cases in which the woman inoculates herself. The decidua scaling off the mouths of the uterine sinuses are lain bare; the passage of the child along the genital canal may produce [illegible] somewhere along that track. If [illegible] of the placenta or membranes are left in utero they decompose, and the pain of passing through the open mouths of the [illegible] sinuses, or through

~~through~~ the open wounds before they begin to heal, the patient inoculates herself, and puerperal septicaemia is set up. Inoculation does not occur after the wounds begin to heal.

Heterogenic infection. — Any material of a septic character introduced, from without, into the genitalia, from [illegible] during or after confinement, may produce the disease. The poison may be carried from one patient to another by physicians or attendants. Epidemics have been produced in this way. It is said that the large epidemics are allowed to grow, the more deadly is the poison which

They are, 1st to prevent the introduction of germs. This by antisepsis before confinement. 2nd To paralyze them action if they have gained entrance. To accomplish this, [illegible] antisepsis at after confinement. 3rd To shut up the [illegible] Lymphatics and Pallopian tubes. This to be done by the employment of [illegible] which promote [illegible] contraction. Physicians should avoid attending cases of labor when fresh from the presence of contagious diseases, or from contact with septic [illegible].

Even if it be true that the pri-
son is one peculiar to puerpe-
ral fever, as some authorities
think, and as Hammermann
seemed to prove, the risk is
too great to allow of him con-
ning the risk of inflicting on
his patient such a disease,
which will most probably
end in her death. Especially
should he avoid attending cases
of labor if he have a patient
with puerperal fever, however
careful he may be to cleanse him-
self and to change his clothes
for with all these precautions,
many instances have been

known where such action on the part of the accoucheur has resulted in death to his patient of this fatal affection. If he should attend women in confinement, while he has a case of puerperal fever, he should change his clothes and disinfect himself for ever, ~~then~~, with these precautions, the danger of conveying the poison from one patient to another is very, very great. Physicians should avoid making too frequent examinations during labor. Care should be taken that no bits of placenta be left in the uterus.

All instruments used should be rendered antiseptic. Should have your solution in a dark light in the bag—in case as they said in preventing reflection. In other words the operation should be in his mind that if this should be with [illegible] [illegible] [illegible]

Professors If any of you read this production of the pen, excuse its brevity originality, and many other faults. And at least accept it as payment of the debt each graduate of medicine owes, that of writing a thesis.

As several of the students say that they have written theses of a hundred pages or more, which if they all did, you would hardly have time to read (matters not how thirsty you might be to acquire the knowledge which they contain).

As a student attending lectures and studying for examination. (and of course to make a good physician of himself) has very little extra time. From these reasons, but more

especially, as I have made very few discoveries yet to astound the medical world, hope you will overlook its brevity, and also its many other imperfections, For I am as poor a writer as Dr. Marion Sim thought he was, when young But as theses are not for the edification of the professors, but to give them an idea of what the student knows. I hope this one will at least show you that your lectures have awaked in me a desire to learn and thoroughly understand the medical science (however for I may be from it at the examinations) And the manner in which all of you dwell upon the importance of making a correct diagnosis, going to the bottom of, or finding out the

cause of everything is why I have chosen such a subject and written — ch a learned discourse.

With this elaborate introduction, which is nearly as long as the thesis itself, I subject, to your possession. if not inspection (and I hope you will not inspect it) this my thesis. asking your forbearance, — especially at the ex —— — and hope I will not have to ask myself. Why did I not get my diploma?

I am very respectfully and humbly yours &c.

Levin West

[illegible] 1880

Why

There is no question a physician or student of medicine, should ask himself oftener, and answer or at least endeavor to answer than that, containing the word Why. He must make of himself as it were, a living interrogation point. And everything he sees, feels hears or does, he must ask himself Why he sees feels hears or does it. It is true that many things occur, or don't occur, the cause of which have not yet been satisfactorily explained, such as the mode of action of some drugs, many things in chemistry, or

Why the stomach don't digest itself
and many other similar questions,
that can only be answered with
an hypothesis, or not at all,
It is true that some say, that the
stomach does not digest itself, from
its vitality, because its walls are
alkaline, the gastric juice only diges-
ting in the presence of an acid, and
from its thick mucous epithelial coating.
But it is known that living things are
digested in the stomach. and when it
comes to the walls being alkaline, pre-
venting the action of the gastric juice
the question comes up. Why don't the
duodenum digest itself, for there
the pancreatic juice digests all
kinds of food. and not, in the presence
of an alkali. or when it comes

to the thick mucus coating and epithelial lining, which are not digestible by the gastric juice, then Why in ulcers of the stomach, where the mucous membrane is destroyed, muscular tissue exposed, Why don't the gastric juice digest right through the walls. But all questions like these, are yet to be solved, and while they will give to their discovered fame, still Whyes that will most concern a young physician starting out, are those that are explainable: and while we may not know, Why a medicine acts, we do know how it acts, and should know Why we give it. Though we don't know, Why the stomach doesn't digest itself, still we know that

it does not digest itself: and should give nourishment to our patients not expecting it to go into the peritoneal cavity, but to be assimilated and absorbed from the stomach &c. When a physician is called to see a patient suffering pain &c. he should find out why there is pain; what remedy will best relieve it, and why. For how foolish to use anodyne liniments for pain refered to the shoulder, when a person has disease of the liver: or to make local applications to the testicle, when a patient has Bright's disease; or how foolish to pour drughs down a woman's throat, expecting to cure her of dys menorrhoea, when an anteflex

ulcerus of the cervix corporis form)
is the cause; Or how not only
foolish but wrong, to treat incip
ient or the first stage of coxalgia
as rheumatism, there by loosing
much precious time.
But he must know Why there is
pain, what is the cause of
trace & to the original cause.
When he performs an operation
he must know Why he operates
whether & is necessary to save
life give a useful limb. or be
of some advantage to the patient.
Or is & only to put money in
his own pocket.
When he gives a medicine he
must know Why he gives & how
& will act. and not give one

drug always for the same dis-
ease. in a mechanical way,
not treat the name of the disease,
but the disease, or its symptoms.
As a student of medicine, with
interest and pleasure, and also
with great practical advantage
to a physician, he might ask,
Why does a blister cause redness
of the part to which it is applied?
Because the vasomotor nerves cause
dilatation of the delivery vessels
of the part, and more blood goes to them
Why does cold or fear cause paleness?
Because an influence is sent to
the vasomotor center, which sends
out an influence to the vasocon-
strictors of the part causing contrac-
tion of the blood vessels, with less blood etc

Why does cold cause roughness of the skin or goose flesh?
Because each hair has at its root a little muscle, which is caused to contract elevating the hair.
Why does alcohol render persons unable to stand as much cold as they could if they did not use it?
Because alcohol prevents oxidation, and causes increased flow of blood to the surface, thus bringing more blood to a part where it is most rapidly cooled.
For the same reason, as the last that of increasing the flow of blood to the surface persons coming into the house from out in the cold and unable to get or fell warm, alcohol causes them to fell warm by

producing dilatation of the peripheral blood vessels. causing more warm blood to flow there. and thus raising the temperature. where the sense of heat and cold resides.

Why is it that a person after receiving a blow upon the head, as in, and having recovered from the first shock may in course of several hours have a secondary shock or collapse?

Because a blood vessel was ruptured by the blow, and the blood escaping all the time into the cranial cavity, causes compression as soon as enough has escaped, The smaller the vessel ruptured, the longer will the secondary shock be in following the first. not only

because it takes longer for the
same quantity to escape but also
because it takes a greater quantity
the brain seems to become accus-
ed as it were to the pressure.
Why should you tie both ends of a
cut artery or vein?
To prevent recurrent hemorrhage.
Why is it that an artery only partially
cut will continue to bleed when
if it were entirely severed it would
cease to bleed.
Because when only partially cut
it cannot retract and thus cause
a clot to be formed.
Why don't a woman after parturi-
tion bleed to death with the great
number of open mouthed veins
opening into the uterus having

only a thin internal coat, and this power to contract or retract in their sheathes?

Because the muscular fibers surrounding the veins, with the contraction of the uterus act like so many ligatures, tying them. Hence the importance of permanent contraction of the uterus to prevent post partum hemorrhage.

Why does the middle muscular coat not extend to the lower part of the uterus?

To give less resistence there, so that the foetus will be driven in that direction by contraction of the uterus. He might ask himself why some lines are so uneven, have so many surfaces, tubercles, processes

able to keep the eyes in the
light should an injured eye, the
sight of which is irrevocably
lost be gotten rid of?
Because it may at any time take
on inflammation and set up
sympathetic inflammation in
the other eye.
Why should blindness be cor-
rected as soon as it is established?
Because after continuing for a
long time light in the squinting
eye is lost from disuse
Why should glaucoma be early
recognized and not be mistaken
for neuralgia?
Because the only cure is early re-
cognition and iridectomy. It
should never be mistaken, or

The Physiological actions and Therapeutical Uses of Arsenic.

Before discussing the actions and uses of Arsenic, it will be necessary to give some of the preparations most commonly used as the pure arsenic is never prescribed itself. The solid preparations most commonly prescribed are arsenious acid and Iodide of Arsenic.

The arsenious acid - acidum arsenosum - is generally found in the shops in white opaque masses. Formerly it was kept in powdered form, but

lesions are found, but generally the mouth, stomach and intestines are inflamed. Eschars & perforations of all the coats of the stomach and duodenum are found. The villous coat of the stomach is reduced to a reddish brown pulp. The heart, kidneys, liver, spleen are found to have undergone fatty degeneration, even when the poison has done its work in a few hours. The above alterations are found also when death ensues from applications of arsenic to large cancerous and ulcerating surfaces.

Asiatic Cholera.

The disease here chosen as the subject of my thesis is known by several names. The terms Malignant cholera, Spasmodic cholera, Epidemic

1880 — Th.

3

Thesis for the de

of Doctor of Med

at the Univ. of Pa

By W. N. Sater.

Thesis.

Adolfo M. Triana

Development of the Embryo.

The whole human body is developed from the female ovum which has been fertilized by the spermatozoa of the male semen. Whatever spiritual, mental, moral or physical powers are found in man must come from this protoplasmic cell which has been thus impressed and undergone various and complicated changes in the accomplishment of such mysterious functions. It will now be our purpose to trace the development of the embryo from the earliest stages of conception to the full development of the membranes and

in the shape of a small pyriform vesicle, springing from the external and internal layers of the blastoderm near the caudal extremity of the embryo. This little organ has an important part to play in forming an apparatus upon which the foetal vessels are projected to the maternal system from which it imbibes the materials of nutrition and to which it gives up those matters that are necessary to get rid of for oxygenification. The blood vessels, two arteries and two veins, one of which after

Typhoid Fever

This disease is essentially the same in every country but it has received different names. The French give it the name of *dothinenteria* or the *typhoid affection*. English and German authors describe it respectively as *enteric fever* and *abdominal typhus* or *gastric fever*. American writers call it *typhoid fever*. It was called typhoid fever from its supposed similarity to typhus fever. But since it is known to be so markedly dissimilar and essentially distinct from that disease probably a better name would be *enteric fever*. For its route of entrance into the system

four feet above the ileo-cæcal valve.
Although changes in these structures closely resembling those which occur in typhoid fever may take place in other diseases, yet in no disease do these processes run a regular course of development and present successive stages of change according to the stage of the malady as in typhoid fever. The first change consists in hyperæmia and cellular infiltration with a resulting softening of the glands and ulceration of them above the walls of the intestine. Both Peyer's patches and

being cut off, become inflamed, necrotic and ulcerate. Thus the symptoms of typhoid fever may depend upon those changes which take place in the liver. Of course these things have not been proved they are hypothetical.

Differential Diagnosis. After five or six days the diagnosis of a typical case of typhoid fever is not difficult. It may be recognized by its gradual development absence of pronounced remissions, the thermometrical curves, headache, tympanites, diarrhoea, tenderness in the right iliac region and gurgling, and the appearance of the

...tion of the thermometer has rendered it a valuable remedy in the hands of a judicious physician. The following is the manner of its use: As soon as the patients axillary temperature runs above 103°F h. he is placed in a bath the temperature of which is 70°F to 75°F. The temperature of the water is gradually lowered by ice or cold water till reduction in the patients temperature is effected. If the temperature fall rapidly to 95°F in five or six minutes the patient should be removed at once, for it will continue to fall after removal. If the fall is more slow the